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Oil, Paint and Drug Reporter

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Sixty-Seventh Congress Was a Busy One

Tariff Law Its Most Notable Achievement — Dyes, Calcium Arsenate, Fertilizers and Petroleum Subjects of Investigation — World Antinarcotic Movement Started—Export Trade Aids Provided

The recent session of Congress was not very prolific of results, as was expected from a short session of Congress, but the whole 67th Congress left quite a considerable record for two years and four sessions, which ended March 4, 1923.

Appropriations had the right of way at the short session, which began early in December, 1922, the total appropriations for the session aggregating an estimated amount of $3,200,000,000 for the fiscal year 1924 and deficiencies from the fiscal year 1923. Appropriations for the fiscal year 1923, made at the long regular session of the 67th Congress, which adjourned in September last, aggregated $3,747,035,000, of which $565,000 000 was for the postal service and payable from postal revenues. The grand total of appropriations for the fiscal year 1922, part of which were made at the first extra session of the 67th Congress, which began in April, 1921, was $4,066,316,000.

Other general legislation enacted at the recent session of Congress included an important farm credits act and the law authorizing the funding of the British national debt to the United States on terms agreed upon in negotiations between the U. S. Debt Funding Commission and representatives of the British Government.

Of special interest to Reporter readers were the following:—

Enactment of the Winslow bill providing for the return of seized German properties up to $10,000 in value in each instance, but exempting from such return patents transferred or licensed to the army and navy and those sold to the Chemical Foundation, but now in litigation between that organization and the government.

The Voigt filled milk bill, which excludes from interstate and foreign commerce filled milk, so-called, made of skimmed milk and vegetable oil.

Anti-narcotic Movement Started

The Porter resolution requesting the President to urge certain foreign governments to limit the cultivation and production of the opium poppy and the coca tree to amounts sufficient only to satisfy the world needs of medicine and science.

A bill authorizing the Secretary of the Interior to recognize the claims of placer claimants to oil and gas lands in the area of the bed of Red River south of the medial line of the channel of that stream, by granting them leases or permits. This measure is to be administered in general accordance with the provisions of the leasing law.

During the 67th Congress the life of the War Finance Corporation was extended and arrangements made for it to make loans to assist agriculture and exportation of agricultural products. Two grain futures acts were passed applying to exchanges and boards of trade dealing in flaxseed and grains. The first one of these measures was declared unconstitutional by the Supreme Court, so an amended measure was passed to correct the defects of the first.

The farmers' co-operative marketing act was passed, exempting farmers' organizations from the anti-trust act. At the recent session an attempt was made unsuccessfully to have organizations of producers of naval stores included under the terms of the co-operative marketing act.

However, bills standardizing and grading naval stores did pass both Houses at the recent session, and Congress also passed a measure prescribing standards of weights and measures for grain products and foodstuffs. Likewise the government butter standard bill passed Congress.

Among the measures not completed by the outgoing Congress were the "blue sky" bill, the so-called "slacker package" bill applying to food and drugs, the anti-commercial bribery bill, and the ship subsidy bill.

The Tariff

Tariff and revenue revision were the biggest subjects before the 67th Congress. The revenue act of 1921 changed materially the war revenue laws and reduced the tax bill of the nation about $80,000,000 in 1921 and nearly a billion in 1922, according to treasury estimates. The revenue act, besides repealing the excess profits tax and reducing the tax on big incomes, repealed the taxes on soda water and the like, proprietary medicines, patent medicines, perfumes and cosmetics, parcels post transportation and other sources of revenue.

The emergency tariff act of 1921 raised duties on various agricultural products, and applied to peanuts, peanut oil, olive oil and other vegetable oils, but it was replaced in September, 1922, by the Fordney-McCumber act for a permanent tariff, which provided what its author regarded as protective rates of duty on chemicals, glass and earths, metals and minerals, agricultural products and foodstuffs, textiles, sundries, and so on, that were aimed to be sufficient to promote development of American industries.

A big feature of the tariff act is the flexible provisions under which rates of duty may be adjusted either way 50 per cent. by the President on advice of the tariff commission, which must consider the differences in cost of production at home and abroad. The law also contained anti-dumping, unfair competition and other general provisions, but it eliminated the embargo on imports of dyestuffs and coal-tar products and certain other chemicals which had been in effect since the war period. A tremendous fight was made for a limited embargo, but Congress decreed that the dye industry would have to get along with the rates in paragraphs 27 and 28 of the new act, which range from 40 per cent. and 7c. per pound to 60 per cent. and 7c. per pound.

Many new items were provided for in the chemical schedule, obsolete items were eliminated, and classification of various articles was changed in the new act. Speaking generally, Congress stood by its old policy of plant food or fertilizer being on the free list, but new duties were levied on cottonseed oil and other oils, and on oil bearing materials. Chemical glassware and surgical instruments were protected. Window glass was given protection, also paints and paint materials. White arsenic was free listed.

Foreign valuation generally applies to articles assessable at ad valorem rates of duty, but the President is empowered to apply American valuation where necessary to safeguard American industry. The rates are higher in the new tariff law than under the Underwood act, but lower generally than those of the emergency tariff act and even of the Payne-Aldrich act, it is claimed. The new law is yielding revenue at a rate indicating that the total collections during the first year of its life will reach $500,000,000 or more.

The budget system was established under one of the first laws enacted by the 67th Congress. Also early in the Congress a resolution was adopted restoring an official state of peace, there having been up to that time a technical state of war. This was followed by separate treaties of peace between the United States and Germany, Austria and Hungary. The House adopted a resolution proposing a constitutional amendment to permit the federal government to tax State, municipal, county and other bonds and securities now exempt, but the Senate did not agree to the same.

Control of the meat packing industry of the country was provided for under a law of the 67th Congress. Federal appropriations from $50.000,000 to $75,000,000 per year to aid the States in constructing and maintaining good roads were authorized under the Townsend act. Immigration was restricted annually to 3 per cent. of the number of persons of any nationality in the United States under the last census.

The Jones-Miller act was passed before the recent session of Congress, for further restrictions upon the importation, exportation and transit shipments of narcotics, crude and finished. Reorganization of the patent office was authorized, with more help and more pay for employes. Agricultural representation on the Federal Reserve Board was provided for and Milo B. Campbell, head of the milk producers and dairy interests, has been appointed in that capacity.

The Volstead anti-beer act became law, being deemed necessary to meet conditions arising under an opinion by former Attorney-General A. Mitchell Palmer. Aid for starving Russians and for the Near East was granted by Congress in resolutions which, among other things, authorized donation of several million dollars' worth of surplus army and navy and Shipping Board medical supplies to relief organizations.

Foreign Trade Fostered

The Edge act was amended to facilitate exports, and the China trade act was passed, authorizing Federal incorporation of concerns engaged in the China trade and exemption from U. S. income taxes of persons resident in China from such business. An attempt was made just recently to remove this limitation and permit a like exemption to persons living in America, but it failed.

The war minerals relief act was amended so as to make it clear that certain claims of war producers of pyrites, tungsten, chrome and manganese who were induced to expend money with a view to such production as a result of publications, posters or proclamations indicating that the government needed such production, could obtain satisfaction on their claims, which are now being adjucated by the War Minerals Relief Commission and Secretary of the Interior.

Oil pollution legislation failed of passage, except a resolution adopted by Congress requesting the President to call a conference of maritime powers to deal with the question of oil pollution of the navigable waters of the world. Preparations have been in progress for many months looking to the calling of this conference.

Muscle Shoals legislation also failed, except appropriations for continuing the work of constructing Wilson dam in the Tennessee River, which would furnish power for operating nitrate plant No. 2. This promises to be a live subject next Congress. The House would not take up the Smith resolution authorizing government purchase and distribution of sodium nitrate and calcium arsenate to the farmers, at cost, to the extent of $10,000,000.

Helium legislation failed except appropriations for army and navy work with that gas. Also legislation authorizing government credits to Germany with which to buy phosphates and other materials and commodities.

Probing Petroleum

In addition to legislation, the 67th Congress was busy in connection with investigations, hearings and probes in various directions. The most recent one of these was the LaFollette investigation of the oil industry, which resulted in a lengthy report containing radical recommendations to remedy alleged existing conditions. This is to be followed during the congressional recess by hearings in an investigation by the Senate Public Lands Committee of Teapot Dome and the leasing of naval reserve oil lands by the Interior Department, and the general administration of the leasing act with particular reference to the question whether there is a monopolization of leasing in Montana and Wyoming.

The Federal Trade Commission was called upon by Congress to investigate foreign oil holdings in the United States with special reference to the Shell-Union merger, and not long ago it submitted a report, which is being printed by the Senate Committee on Manufacture. Earlier in the Congress the State Department submitted a report on the policy of foreign countries as regards discrimination or fair treatment of American oil interests, and quite recently the Interior Department has been conducting hearings to determine whether the leasing act applies to certain Indian lands.

Other Investigations

There have been two government investigations of the calcium arsenate situation recently by order of Congress. One conducted jointly by the geological survey and bureau of entomology reported a mass of facts and the other, by the Federal Trade Commission, which resulted in a report submitted to Congress the day before its final adjournment, on the question of an alleged combination in the calcium arsenate industry.

The Federal Trade Commission also reported to Congress March 4 on the fertilizer industry as a result of frequent charges by Senator Heflin and others that there is a fertilizer trust. There have likewise been reports from the Federal Trade Commission to Congress during the past two years relating to the tobacco trade and to other matters.

Many committees of Congress have conducted extensive hearings in the course of investigation of various matters or consideration of legislation. Besides the tariff and revenue hearings and the hearings incidental to the preparation of the annual appropriation bills have been voluminous.

The war frauds investigating committees of the House conducted hearings at many points and submitted a series of reports. Then the Department of Justice took up investigation of war contracts under a special half million dollar appropriation by Congress.

Exhaustive hearings on the subject of Muscle Shoals were held by the House Military Affairs Committee and the Senate Committee on Agriculture, in which various phases of the nitrate and fertilizer situation were thoroughly ventilated. More recently the House Committee on Agriculture gave hearings on the Smith nitrate resolution.

The House Committee on Interstate and Foreign Commerce and Senator Cummins' subcommittee at the other end of the Capitol heard witnesses at length upon the alien property situation, claims against Germany, and blue sky legislation. The first two subjects are being dealt with under legislation of the recent Congress.

The subject of helium control was gone into thoroughly by the House Public Lands Committee, only to have the helium control bill later referred to the Military Committee.

Resultless Dye Probe

Many other hearings and investigations have been carried on during the late Congress, not the least of which was before a special committee headed by Senator Shortridge of California, into charges of Senator King that there was a monopoly in the American dye manufacturing industry and that it had maintained a lobby to influence embargo or other legislation.

The Shortridge committee conducted hearings for a number of weeks, during which leaders on both sides of the controversy over protection for the dye industry, including representatives of manufacturers, importers and consumers, were allowed to state their views at length and were also closely questioned. The committee heard Francis P. Garvan, Gen. Amos A. Fries, Charles H. Herty, Mr. Patterson of the Textile Alliance, and others, in support of the industry and in denial of the charges of a lobby and a monopoly. On the other hand it heard Herman A. Metz and representatives of Kutroff, Pickhardt & Co., and of certain textile interests in opposition.

No formal report was ever presented from the committee, but Chairman Shortridge has stated that the investigation disclosed that there was not a dye monopoly. About the time the dye provisions of the tariff bill were due to come up in the Senate the government's attack on the Chemical Foundation to recover former German chemical patents sold to it was sprung. This fact, together with bad handling of the case of the dye industry, in the opinion of some of its friends, ultimately led to defeat of the proposed temporary extension of the embargo.

Probes and investigations continue to be the fashion. A special commission is seeking facts as regards the coal situation to report to Congress next winter. A senatorial committee has undertaken to study problems pertaining to the production of gold and silver during the congressional recess, and another senatorial committee plans trips to the south, New England and the Pacific coast to study the forests with a view to a plan to encourage reforestation.

Tariff Act Gives Producers Rights

For the first time in the history of American tariff making, the law of 1922 expressly accords the right to all manufacturers and producers to intervene and protest any rate levied or construction had by a collector or value assessed by an appraiser. In an analysis of this new departure, Judge Marion DeVries points out that manufacturers and producers are now on the same legal footing with importers and can intervene in upholding in its integrity the enacted law.

Hundreds of thousands of protests have been filed by importers against every tariff act of recent years. A great percentage of these have been sustained by the departments or courts. For several decades the court records show on final decision between 40 and 50 per cent. of importers' claims to have been sustained. It stands to reason that if this vast number of errors were made against importers, a multitude were likewise made against the manufacturing interests which, with the present right of intervention and protests, could have been asserted in the customs tribunal and courts and corrected by the interested manufacturers. And, without doubt, many contentions of importers could have been, with more diligent scrutiny of customs administration and the added opposition afforded by this act, defeated.

It, therefore, vitally behooves every manufacturer, as an individual or by joining with those of like and similarly interested industries, to be vigilant of, assert and defend before the customs officials, tribunals, and courts the protection accorded them by the existing law.

Further relief is afforded manufacturers and producers by the elastic or flexible, the dumping, and the countervailing provisions, sections 315, 316 and 317, of the current act.

In fact, assembled in these provisions are all the powers of Congress to secure this protection for the interests of American manufacturers, through the remedies therein provided and the functions delegated the United States Tariff Commission and the President. These provisions are open to be availed of at any moment when a rate of duty is found insufficient to protect any particular or class of industries, or there is discovered an unfair transaction affecting any particular trade or business. Full procedure is now provided by rules of the Tariff Commission at Washington for manufacturers or producers to have raised under certain conditions the rates applicable and to have changed an unfair, unequal or unjust classification. Or, wherever foreign duties, discriminations or regulations close to the American manufacturers or producers the markets of any competing country, complete procedure is now provided whereby on application of American producers such may be relieved.

By this act complete guaranty is given manufacturers and producers of the intended and the just protection afforded by the act, and fair treatment by foreign trade competitors and by foreign governments.

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Tariff Rates of New Law Compared with Old

List of Duties Imposed by McCumber-Fordney Act on Chemicals, Drugs, Oils, Paints, Dyes and Allied Articles, and Those of Underwood Act and Emergency Tariff and Other Amendments

Title I
Dutiable List
Schedule 1—Chemicals, Oils and Paints

	McCumber-Fordney Act.	Underwood Act.
Acids, acetic, not over 65% (lb.)	¾c	Free
over 65%	2c	Free
Anhydride (lb.)	5c	2½c
Boric (lb.)	1½c	¾c
Chloracetic (lb.)	5c	15%
Citric (lb.)	17c	5c
Lactic, under 30% (lb.)	2c	1½c
30% or more and under 55% (lb.)	4c	1½c
55% or more (lb.) (Must not be less than 25% ad valorem.)	9c	1½c
Tannic, tannin and extracts of nutgalls, under 50% (lb.)	4c	5c
50% or more, non-med. (lb.)	10c	5c
50% or more, med. (lb.)	20c	5c
Tartaric (lb.)	6c	3½c
Arsenic (lb.)	3c	Free
Formic	25%	1½c lb.
Gallic (lb.)	8c	6c
Oleic or red oil (lb.)	1½c	15%
Oxalic (lb.)	4c	1½c
Phosphoric (lb.)	2c	Free
Pyrogallic (lb.)	12c	12c
Stearic (lb.)	1½c	15%
Other acids and acid anhydrides n.s.p.f.	25%	15%
Acetaldehyde, aldol and acetaldol, aldehyde ammonia, butyraldehyde, crotonaldehyde, paracetaldehyde, ethylene chlorohydrin, ethylene dichloride, ethylene glycol, ethylene oxide, glycol monoacetate, propylene chlorohydrin, propylene dichloride, propylene glycol (lb.)	6c+30%	15%
Acetone, acetone oil, ethyl methyl ketone	25%	1c lb.
Alcohol—Amyl, butyl, propyl (lb.)	6c	¼c
Fusel oil (lb.)	6c	¼c
Methyl (wood) gallon	12c	Free
Ethyl (non-beverage) gallon	15c	
All chemical elements, chemical salts and compounds, medicinal preparations, combinations and mixtures of any of the foregoing, obtained naturally or artificially and not specially provided for	25%	15%
Synthetic organic chemicals (non-coal tar)	25%	15%
Aluminum hydroxide (lb.)	½c	15%
Potash alum. (lb.)	¾c	15%
Ammonia alum (lb.)	¾c	15%
Aluminum sulphate, alum cake, aluminous cake, not over 15% alumina and more iron than equivalent of one-tenth of 1% of ferric oxide (lb.)	3-10c	15%
More than 15% alumina, not more iron than equivalent of one-tenth of 1% of ferric oxide (lb.)	⅜c	15%
Other aluminum salts and compounds not specially provided for	25%	15%
Ammonium carbonate and bicarbonate (lb.)	1½c	¾c
Bromide (lb.)	10c	15%
Chloride (lb.)	1¼c	¾c
Nitrate (lb.)	1c	Free
Perchlorate (lb.)	1½c	Free
Phosphate (lb.)	1½c	1c
Sulphate (lb.)	¼c	Free
Ammonia, anhydrous, liquid (lb.)	2½c	2½c
Antimony oxide (lb.)	2c	25%
Tartar emetic (lb.)	6c	15%
Antimony sulphides and other salts and compounds not specially provided for (lb.)	1c+25%	25%
Argols (not over 90%)	5%	5%
Over 90% (lb.)	5c	2½c
Cream tartar and Rochelle salt (lb.)	5c	2½c
Calcium tartrate, crude	5%	5%
Calcium arsenate	25%	
Calcium acetate (countervailing duty from Canada) (lb.)	17½c	
For fertilizer (countervailing duty from Canada) (lb.)	10%	
Balsams, crude	10%	10%
Amber and amberoid, unmanufactured, not specially provided for (lb.)	$1	$1
Gum, Arabic or senegal (lb.)	½c*	½c
Barium carbonate, precipitated (lb.)	1c	15%
Chloride (lb.)	1¼c	¼c
Dioxide (lb.)	4c	1½c
Hydroxide (lb.)	1¼c	15%
Nitrate (lb.)	2c	15%
Blackings, cleaning or polishing compounds, not specially provided for, non-alcoholic	25%	15%
Bleaching powder (lb.)	3-10c	1-10c
Caffeine (lb.)	$1.50	$1
Compounds	25%	25%
Tea waste and sweepings (lb.)	1c	1c
Calcium carbide (lb.)	1c	Free
Calomel and other mercurial preparations	45%	15%
Carbon tetrachloride (lb.)	2½c	1c
Chloroform (lb.)	6c	2c
Tetrachloroethane and trichlorethylene	35%	15%
Casein (lb.)	2½c	Free
Chalk or whiting, dry (%)	25%	1-10c lb.
ground in oil, putty (lb.)	¾c	15%
manufactured (%)	25%	25%
Chemical compounds of gold, platinum, rhodium or silver (%)	25%	10%
Bismuth compounds (%)	35%	10%
Chemicals, drugs, medicinal and similar substances, dutiable or free, imported in capsules, pills, tablets, (%) not under	25%	25%
Chemical elements and medicinal compounds, essential oils, animal oils and greases, ethers and esters, natural and synthetic flavors and their combinations containing alcohol, except perfumery and spirit varnishes, and all alcoholic compounds not especially provided for, containing 20% or less alcohol (lb.)	20c+25%	10c+20%
Over 20% and not more than 50% alcohol (lb.)	40c+25%	20c+20%
Over 50% alcohol (lb.)	80c+25%	40c+20%
Chicle, crude (lb.)	10c	15c
refined (lb.)	15c	20c
Chloral hydrate (%)	35%	25%
Terpin hydrate (%)	35%	25%
Thymol (%)	35%	25%
Urea (%)	35%	25%
Glycerophosphoric acid and compounds (%)	35%	25%
Coal-tar intermediates (lb.) (7c+40% after 2 years)	7c+55%	5 to 10%

Special duty act of 1916, sliding scale from 2½c a pound, plus 15%.

Coal-tar intermediates include the following:

Acetanilide not suitable for medicinal use, alpha-naphthol, aminobenzoic acid, aminonaphthol, aminophenetole, aminophenol, aminosalicylic acid, aminoanthraquinone, aniline oil, aniline salt, anthraquinone, arsanilic acid, benzaldehyde not suitable for medicinal use, benzal chloride, benzanthrone, benzidine, benzidine sulfate, benzoic acid not suitable for medicinal use, benzoquinone, benzoyl chloride, benzyl chloride, benzylethylaniline, beta-naphthol not suitable for medicinal use, bromobenzene.

Chlorobenzene, chlorophthalic acid, cinnamic acid, cumidine, dehydrothiotoluidine, diaminostilbene, dianisidine, dichlorophthalic acid, dimethylaniline, dimethylaminophenol, dimethylphenylbenzylammonium hydroxide, dimethylphenylenediamine, dinitrobenzene, dinitrochlorobenzene, dinitronaphthalene, dinitrophenol, dinitrotoluene, dihydroxynaphthalene, diphenylamine, hydroxyphenylarsinic acid, metanilic acid, methylanthraquinone.

Naphthylamine, naphthylenediamine, nitroaniline, nitroanthraquinone, nitrobenzaldehyde, nitrobenzene, nitronaphthalene, nitrophenol, nitrophenylenediamine, nitrosodimethylaniline, nitrotoluene, nitrotoluylenediamine, phenol, phenylenediamine, phenylhydrazine, phenylnaphthylamine, phenyliglycine, phenyliglycineortho-carboxylic acid, phthalic acid, phthalic anhydride, phthalimide, quinaldine, quinoline.

Resorcinol not suitable for medicinal use, salicylic acid and its salts not suitable for medicinal use, sulfanilic acid, thiocarbanilide, thiosalicylic acid, tetrachlorophthalic acid, tetramethyldiaminobenzophenone, tetramethyldiaminodiphenyl methane, toluene sulfochloride, toluene sulfonamide, tribromophenol, toluidine, tolidine, tolylenediamine, xylidine.

Anthracene having a purity of 30 per centum or more, carbazole having a purity of 65 per centum or more, metacresol having a purity of 90 per centum or more, naphthalene which after the removal of all water present has a solidifying point of seventy-nine degrees centigrade or above, orthocresol having a purity of 90 per centum or more, para-cresol having a purity of 90 per centum or more; all the foregoing products in this paragraph whether obtained, derived, or manufactured from coal tar or other source.

All distillates of coal tar, blast-furnace tar, oil-gas tar, and water-gas tar, which on being subjected to distillation yield in the portion distilling below one hundred and ninety degrees centigrade a quantity of tar acids equal to or more than 5 per centum of the original distillate or which on being subjected to distillation yield in the portion distilling below two hundred and fifteen degrees centigrade a quantity of tar acids equal to or more than 75 per centum of the original distillate; all similar products by whatever name known, which are obtained, derived, or manufactured in whole or in part from any of the products provided for in this paragraph, or from any of the products provided for in paragraph 1549.

All mixtures, including solutions, consisting in whole or in part of any of the foregoing products provided for in this paragraph, except sheep dip and medicinal soaps; all the foregoing products provided for in this paragraph, not colors, dyes, or stains, color acids, color bases, color lakes, leuco-compounds, indoxyl, indoxyl compounds, ink powders, photographic chemicals, medicinals, synthetic aromatic or odoriferous chemicals, synthetic resinlike products, synthetic tanning materials, or explosives, and any of the products provided for in paragraph 1549. (The foregoing includes cresylic acid.)

	McCumber-Fordney Act.	Underwood Act.
Coal tar finished products (lb.) (7c+45% after 2 years)	7c+60%	15 to 30%

Special duty, act of 1916, sliding scale from 5c a pound, plus 30%.

Finished coal-tar products include the following:—

All colors, dyes, or stains, whether soluble or not in water, color acids, color bases, color lakes, leuco-compounds, whether colorless or not, indoxyl and indoxyl compounds; ink powders; photographic chemicals.

Acetanilide suitable for medicinal use, acetphenetidine, acetylsalicylic acid, antipyrine, benzaldehyde suitable for medicinal use, benzoic acid suitable for medicinal use, beta-naphthol suitable for medicinal use, guaiacol and its derivatives, phenolphthalein, resorcinol suitable for medicinal use, salicylic acid and its salts suitable for medicinal use, salol, and other medicinals; sodium benzoate; saccharin.

Artificial musk, benzyl acetate, benzyl benzoate, coumarin, diphenyloxide, methyl anthranilate, methyl salicylate, phenylacetaldehyde, phenylethyl alcohol, and other synthetic odoriferous or aromatic chemicals, including flavors, all of these products not marketable as perfumery, cosmetics, or toilet preparations, and not mixed and not compounded, and not containing alcohol.

Synthetic phenolic resin and all resinlike products prepared from phenol, cresol, phthalic anhydride, coumarone, indene, or from any other article or material provided for in paragraph 27 or 1549, all of these products whether in a solid, semisolid, or liquid condition; synthetic tanning materials; picric acid, trinitrotoluene, and other explosives except smokeless powders; all of the foregoing products provided for in this paragraph, when obtained, derived, or manufactured in whole or in part from any of the products provided for in paragraph 27 or 1549.

Natural alizarin and natural indigo, and colors, dyes, stains, color acids, color bases, color lakes, leuco-compounds, indoxyl, and indoxyl compounds, obtained, derived, or manufactured in whole or in part from natural alizarin or natural indigo; natural methyl salicylate or oil of wintergreen or oil of sweet birch; natural coumarin, natural guaicol and its derivatives; and all mixtures, including solutions, consisting in whole or in part of any of the articles or materials provided for in this paragraph, excepting mixtures of synthetic odoriferous or aromatic chemicals.

(Coal-tar ad valorem duties are based on American valuation).

Coal-tar biological stains (lb.)	7c+45%	
Cobalt oxide (lb.)	20c	10c
Sulphate and linoleate (lb.)	10c	15%
other salts and compounds (%)	30%	15%
Celluiose esters, collodion, etc. (lb.)	35c	15%
Pyroxylin compounds, unfinished (lb.)	40c	25%
finished	60%	40%
Casein compounds, galalith, unfinished (lb.)	25c	
finished	40c+25%	
Copper carbonate	25%	15%
Oxide	25%	15%
Drugs, natural and uncompounded, N.E.S., advanced in value	10%	10%
Aconite, aloes, asafetida, cocculus, indicus, ipecac, jalap, manna, marshmallow roots, leaves and flowers, mate, pyrethrum, advanced in value	10%	10%
Buchu leaves (lb.)	10c	10c
Coca leaves (lb.)	10c	10c
Gentian (lb.)	¼c	¾c
Licorice root (lb.)	½c	¾c
Sarsaparilla root (lb.)	1c	1c
Belladonna, digitalis, henbane, stramonium (%)	25%	10%
Ergot (lb.)	10c	10c
Ethers and esters, N.E.S., not more than 10% alcohol	25%	20%
Diethyl sulphate (%)	25%	20%
Dimethyl sulphate	25%	15%
Ethyl acetate (lb.)	3c	5c
Ethyl chloride (lb.)	15c	20%
Ethyl ether (lb.)	4c	4c
Extracts, non-alcoholic, dyeing and tanning, N.E.S.	15%	
Chestnut	15%	Free
Chlorophyll	15%	15%
Cutch, divi-divi, fustic, hemlock, logwood, mangrove, myrobalan, oak, persian berry, quebracho, sumac	15%	⅝c lb
Safflower	15%	⅝c
Saffron, saffron cake	15%	10%
Valonia, wattle	15%	⅝c lb
Mixtures and combinations	15%	

	McCumber-Fordney Act.	Underwood Act.
Flavoring extracts:—Non-alcoholic, natural or synthetic, N.E.S.	25%	20%
fruit flavors	25%	15%
fruit esters	25%	20%
oils	25%	20%
essences	25%	20%
Formaldehyde, solution (lb.)	2c	1c
Paraformaldehyde (lb.)	8c	25%
Hexamethylenetetramine	25%	15%
Gelatin, edible, valued at less than 40c. per lb. (lb.)	3½c+20%	1c to 25%
valued at 40c. or more per lb. (lb.)	7c+20%	25%
Gelatin, glue, glue size and fish glue, N.E.S., valued at less than 40c. per lb. (lb.)	1½c+20%	1c to 25%
valued at 40c. or more per lb. (lb.)	7c+20%	25%
Manufacturers of gelatin, glue or glue size	25%	25%
Casein glue	25%	1c to 25%
Agar-agar	25%	20%
Isinglass, and other fish sounds, prepared	25%	25%
Glycerin, crude (lb.)	1c	1c
refined (lb.)	2c	2c
Ink and ink powders, N.E.S.	20%	15%
Iodine, resublimed (lb.)	20c	Free
Bromine (lb.)	10c	Free
Bromine compounds, N.E.S. (lb.)	10c	15%
Lead and lead compounds, N.E.S.:	30%	20%
Acetate, white (lb.)	2½c	1¼c
brown, gray, yellow (lb.)	2c	1c
Nitrate (lb.)	3c	1¼c
Arsenate (lb.)	3c	20%
Resinate (lb.)	3c	20%
Licorice, extracts	25%	1c lb
Lime, citrate (lb.)	7c	1c
Magnesium:—Carbonate, precipitated (lb.)	1½c	1½c
Chloride, N.E.S. (lb.)	5/6c	15%
Anhydrous (lb.)	1c	
Sulphate (Epsom salt) (lb.)	½c	1/10c
Oxide (calcined magnesia), medicinal (lb.)	3½c	3½c
non-medicinal (lb.)	3½c	2½c
Manganese compounds, N.E.S.	25%	Free
Menthol (lb.)	50c	50c
Camphor, crude, natural (lb.)	1c	1c
refined or synthetic (lb.)	6c	5c
Animal oils:—N.E.S.	20%	15%
Sod, herring, menhaden (gal.)	5c	3c
Whale (gal.)	6c	5c
Seal (gal.)	6c	3c
Sperm (gal.)	10c	8c
Fish oils, N.E.S.	20%	3c
Wool grease, crude (lb.)	½c	¼c
purified (lb.)	1c	½c
Expressed oils:—N.E.S.	20%	15%
Castor (lb.)	3c	12c gal
Hempseed (lb.)	1½c	3c gal
Linseed or flaxseed (lb.)	3 3-10c	10c gal
Olive oil, N.E.S. (lb.)	6½c	20c gal
Emergency tariff, 40c a gallon. weighing with container less than 40 lbs. (lb.)	7½c	30c gal
Emergency tariff, 50c a gallon. Poppyseed (lb.)	2c	6c gal
Rapeseed (gal.)	6c	6c gal
Coconut (lb.)	2c	Free
Emergency tariff, 20c a gallon. Cottonseed (lb.)	3c	Free
Emergency tariff, 20c a gallon. Cottonseed foots (foreign origin)	10%	
Peanut (lb.)	4c	6c gal
Emergency tariff, 26c a gallon. Soya bean (lb.)	2½c	Free
Emergency tariff, 20c a gallon. Alizarin assistant (Turkey red oil)	35%	25%
Sulphonated oils	35%	15%
Soaps made from castor oil	35%	25%
Soluble greases	35%	25%
Hardened oils or fats (lb.)	4c	(Same as basic oils)
Chemically changed oils and fats, N.E.S.	20%	20%
Oil combinations or mixtures, N.E.S., non-alcoholic	25%	10%
Distilled oils:—N.E.S., non-alcoholic	25%	20%
Lemon, orange	25%	10%
Clove, eucalyptus	25%	20%
Peppermint	25%	25c lb
Patchouli	25%	20%
Sandalwood	25%	20%
Opium, crude (lb.)	$3.00	$3.00
powdered (lb.)	4.00	4.00
less than 8.5% of anhydrous morphine (lb.)	6.00	6.00
Morphine, etc. (oz.)	3.00	3.00
Cocaine, etc. (oz.)	2.60	2.00
Laudanum, etc.	60%	60%
Perfume materials, N.E.S. not more than 10% alcohol	45%	20%
Ambergris	20%	20%
Castoreum	20%	Free
Civet	20%	20%
Musk	20%	20%
Anethol, citral, geraniol, heliotropin, ionine, rhodinol, safrol, terpineol	45%	
Vanillin	45%	10c doz
Mixtures or combinations (lb.)	40c+50%	20%
Perfumery, cosmetics and toilet preparations, alcohol	40c+75%	40c+60%
non-alcoholic	75%	60%
Floral waters, non-alcoholic	20%	20%
Bay rum	40c+60%	$1.75 gal.
Paris green	15%	Free
London purple	15%	Free
Phosphorus	8c	Free
Plasters, healing and court	20%	15%
Pigments, artists' colors (including coal-tar), unassembled	40%	20%
assembled	70%	20%
Paints, colors, stains	25%	15%
Barytes, crude (ton)	$4	15%
ground (ton)	$7.50	20%
Blanc fixe (lb.)	1c	20%
Blue pigments (lb.)	8c	20%
Ultramarine blue (lb.)	3c	15%
Bone black, lampblack, etc. (Bone black suitable for use as a pigment was dutiable at 15% under the Underwood Act.)	20%	Free
Chrome colors	25%	20%
Black pigments, N.E.S.	20%	15%
Lead pigments, N.E.S.	30%	25%
Litharge (lb.)	2½c	25%
Orange mineral (lb.)	3c	25%
Red lead (lb.)	2¾c	25%
White lead (lb.)	2½c	25%
Ochers, siennas and umbers, crude, (lb.)	1¼c	5%
ground	⅝c	5%
Iron oxide, N.E.S.	20%	10%
Iron hydroxide pigments, n.s.p.f.	20%	10%
Satin white, precipitated calcium sulphate (lb.)	½c	20%
Varnishes, N.E.S.	25%	10%
under 5% alcohol (gal.)	$2.20+25%	$1.32+15%
5% or more alcohol	25%	10%
Vermilion reds (lb.)	28c	15%
Zinc oxides—Dry (lb.)	1¾c	10%
In oil or water (lb.)	2¼c	15%
Lithopone (lb.)	1¾c	15%
Potassium—Chromate (lb.)	2¼c	1c
Chlorate (lb.)	1½c	½c
Ferricyanide (lb.)	7c	2c
Ferrocyanide (lb.)	4c	1¼c
Iodide (lb.)	2½c	1½c
Bromide (lb.)	10c	15%

	McCumber-Fordney Act.	Underwood Act.
Potassium, bicarbonate (lb.)	1½c	½c
Carbonate (lb.)	¾c	Free
Hydroxide (caustic potash) (lb.)	1c	Free
Nitrate, refined (lb.)	½c	$7 ton
Permanganate (lb.)	4c	1c
Santonin and salts of (lb.)	75c	Free
Soap, N.E.S.	15%	5%
Castile	15%	10%
Toilet, perfumed	30%	30%
Unperfumed	30%	10%
Sodium—		
Arsenate (lb.)	1c	Free
Bicarbonate (lb.)	¼c	½c
Bisulphite and metabisulphite (lb.)	⅜c	¼c
Borate (lb.)	¼c	½c
Bromide (lb.)	10c	15%
Sal soda (lb.)	¼c	½c
Carbonate (ash) (lb.)	¼c	Free
Monohydrated (lb.)	¼c	½c
Chlorate (lb.)	1½c	½c
Chloride (100 lbs.)	11c	Free
In bulk (100 lbs.)	7c	Free
Chromate and dichromate (lb.)	1¾c	¾c
Formate (lb.)	2c	15%
Ferrocyanide (lb.)	2c	¾c
Hydroxide (caustic soda) (lb.)	½c	¼c
Nitrite (lb.)	3c	½c
Phosphate (lb.)	½c	¼c
Sesquicarbonate (lb.)	¼c	¼c
Sulphate, crystallized (ton)	$1	$1
Anhydrous (ton)	$2	15%
Sulphide, containing not more than 35% of sodium sulphide (lb.)	⅝c	¼c
More than 35% (lb.)	¾c	¼c
Silicate (lb.)	⅜c	Free
Sulphite and thiosulphate (lb.)	⅝c	¼c
Hydrosulphite	35%	15%
Sulphoxylate	35%	15%
Starch, N.E.S. (lb.)	1c	½c
Potato (lb.)	1¾c	1c
Soluble or chemically treated	1¼c	
Dextrine, N.E.S. (lb.)	1¼c	¾c
From potato starch (lb.)	2¼c	1¼c
Dextrine substitute (lb.)	1¼c	
Strontium salts	25%	15%
Strychnine (oz.)	15c	Free
Thorium salts	35%	25%
Cerium nitrate and other cerium salts, n.s.p.f.	35%	15%
Tin salts	25%	10%
Titanium salts	30%	15%
Vanilla beans (lb.)	30c	30c
Tonka beans (lb.)	25c	25c
Zinc chloride (lb.)	1 3/10c	½c
Sulphate (lb.)	⅜c	½c
Sulphide (lb.)	1½c	15%

Schedule 2—Earths, Earthenware and Glassware

Limestone, crude (100 lb.)	5c	Free
Lime, N.E.S. (100 lb.)	10c	5%
Hydrated (100 lb.)	12c	5%
Magnesite, crude (lb.)	5-16c	Free
Caustic calcined (lb.)	5-8c	Free
Dead burned and grained (lb.)	23-40c	Free
Gypsum, ground or calcined (ton)	$1.40	10%
Pumice stone, crude, valued at $15 or less per ton (lb.)	1-10c	5%
more than $15 per ton (lb.)	¼c	5%
manufactured (lb.)	55-100c	¼c
Clays or earths, crude (ton)	$1	50c
Manufactured (ton)	$2	$1
China or kaolin (ton)	$2.50	$1.25
Bauxite, crude (ton)	$1	Free
Fuller's earth, crude (ton)	$1.50	75c
Manufactured (ton)	$3.25	$1.50
Silica, crude, N.E.S. (ton)	$4	Free
Pigment, N.E.S. (ton)	$7.50	Free
Fluorspar (ton)	$5.60	$1.50
Mica, ground	20%	15%
Bottles, N.E.S. (lb.)	1c	45%
Between ¼ and 1 pint (lb.)	1½c	30%
Less than ¼ pint (gross)	50c	30%
Talc, soapstone, crude (lb.)	¼c	Free
Ground	25%	15%
Graphite, amorphous	10%	Free
Lump	20%	Free
Flake (lb.)	1½c	Free
Chemical, biological, pharmaceutical, metallurgical and surgical articles and utensils of glass or combination	65%	30%
Filter tubes		30%
Glass, cylinder, crown and sheet, unpolished—		
Not exceeding 150 sq. inches (lb.)	1¼c	⅞c
Above 150 and not over 384 sq. inches (lb.)	1⅜c	1c
Not over 720 sq. inches (lb.)	1⅝c	1⅛c
Not over 864 sq. inches (lb.)	1¾c	1½c
Not over 1200 sq. inches (lb.)	2c	1½c
Not over 2400 sq. inches (lb.)	2¼c	1⅞c
Above that (lb.)	2½c	2c
Polished—		
Not over 384 sq. inches (sq. ft.)	4c	3c
Not over 720 sq. inches (sq. ft.)	6c	4c
Not over 1440 sq. inches (sq. ft.)	12c	7c
Above that (sq. ft.)	15c	10c
Fluted, ribbed, rolled or rough plate (with or without wire netting)—		
Not over 384 sq. inches (sq. ft.)	¾c	½c
Above that (sq. ft.)	1½c	1c
Cast, polished, plate glass, finished or unfinished, unsilvered—		
Not over 384 sq. inches (sq. ft.)	12½c	6c
Not over 720 sq. inches (sq. ft.)	15c	8c
Above that (sq. ft.)	17½c	12c
Smalts, frostings, ceramic and glass colors, fluxes, glazes and enamels, ground or pulverized	30%	15%
In any other form	40%	15%

Schedule 3—Metals and Manufactures of

Manganese ore, over 30% mn. manganese content (lb.)	1c	Free
Tungsten ore, or tungsten content (lb.)	45c	Free
Molybdenum ore or concentrates (lb.)	35c	Free
Manganese metals (lb.)	1⅞c+15%	10%
Molybdenum powder, ferro, metallic, calcium and compounds and alloys (lb.)	50c+15%	15%
Tungsten powder, acid, ferro, metallic and compounds (lb.)	60c+25%	15%
Calcium silicide	25%	15%
Cerium metal (lb.)	$2	30%
Surgical instruments, metal	45%	20-50%
Philosophical, scientific and laboratory instruments (metal)	40%	Free
Dental instruments, metal	35%	Free
Magnesium, metallic, and scrap (lb.)	40c	25%
Alloys and finished products N.E.S. (lb.)	40c+20%	25%
Antimony, metal (lb.)	2c	10%
Liquated (lb.)	¼c	Free
Bismuth, metal	7½%	Free
Cadmium metal (lb.)	15c	Free
Arsenic, metal (lb.)	6c	Free
Aluminum or tin foil, less than 6/1000 inch in thickness	35%	
Bronze powder (lb.)	14c	25%
Powdered aluminum, foil, tin, brocades, flitters and metallics, manufactured (lb.)	12c	25%
Bronze, Dutch metal or aluminum leaf (100 leaves)	6c	25%
Gold leaf (100 leaves)	55c	35%
Silver leaf (100 leaves)	5c	30%
Quicksilver (lb.)	25c	10%
Azides, fulminates, fulminating powder, etc., n.s.p.f. (lb.)	12½c	Free
Nickel oxide (lb.)	1c	10%
Bottle caps, metal, collapsible tubes, sprinkler tops, undecorated	30%	30%
Decorated	45%	4%
Lead ores and mattes, on lead content (lb.)	1½c	¾c
Bullion, etc., N.E.S. (lb.)	2½c	25%
Zinc ores, containing 10% and less than 20% zinc, on zinc content (lb.)	½c	10%
Containing less than 25% (lb.)	1c	10%
More than 25% (lb.)	1½c	10%
Blocks, pigs, slabs and dust (lb.)	1¾c	15%

Schedule 4—Wood and manufactures of

	McCumber-Fordney Act.	Underwood Act.
Wood flour	33⅓%	Free

Schedule 5—Sugar, molasses and manufacturers of

Dextrose, testing not above 99.7%, and dextrose syrup (lb.)	1½c	Free
Adonite, arabinose, dulcite, galactose, inosite, inulin, levulose, mannite, d-talose, d-tagatose ribose, melibose, dextrose testing above 99.7%, mannose, melezitose, raffinose, rhamnose, salicin, sorbite, xylose and other saccharides	50%	Free
Blackstrap molasses for cattlefeed (gal.)	½c	

Schedule 7—Agricultural products and provisions

Extract of meat (lb.)	15c	10c
Milk powder, whole (lb.)	3c	Free
Cream powder (lb.)	7c	Free
Skimmed milk powder (lb.)	1½c	Free
Malted, or mixtures and substitutes for milk	20%	Free
Egg albumen, prepared, n.s.p.f. (lb.)	6c	1c
dried (lb.)	18c	3c
Honey (lb.)	3c	10c gal.
Oleomargarine, other butter substitutes (lb.)	8c	2½c
Patent barley and barley flour (lb.)	2c	1c
Almonds (lb.)	4¾c	3c
Shelled (lb.)	14c	4c
Coconuts (each)	½c	Free
meat, prepared (lb.)	3½c	2c
Peanuts (lb.)	3c	¾c
Emergency tariff, 3c a pound.		
Shelled (lb.)	4c	¾c
Oil seeds and materials—		
Castor beans (lb.)	½c	15c bu
Flaxseed (56-lb. bushel)	40c	20c
Emergency tariff, 30c a bushel.		
Poppyseed (100 lbs.)	32c	15c bu
Sunflower seed (lb.)	2c	5c (non-edible free)
Apricot and peach kernels (lb.)	3c	3c
Soya beans (lb.)	½c	Free
Cottonseed (lb.)	⅓c	Free
Other garden and field seeds N.E.S., including such seeds whether used for planting or for other purposes (lb.)	6c	
By-product feeds, cereal	15%	
Mixed feeds (grain with oil cake, oil cake meal, molasses, etc.)	10%	
Screenings of flaxseed, etc.	10%	
Almond paste (lb.)	14c	1c
Nut and kernel paste, n.s.p.f.	25%	1c lb.
Dandelion roots, crude (lb.)	1½c	Free
Ground (lb.)	3c	2c
Chicory root, crude	1½c lb.	1c lb.
prepared	3c	2c lb.
Hops (lb.)	24c	16c
Extract (lb.)	$2.40	50%
Lupulin (lb.)	75c	50%
Cacao butter	25%	3½c lb.
Spices and spice seeds, herbs or herb leaves, N.E.S. (Seeds n.s.p.f. were 5c. a pound under the Underwood act.)	25%	20%
Anise seeds (lb.)	2c	2c
Caraway seeds (lb.)	1c	1c
Cardamom seeds (lb.)	10c	Free
Cassia (lb.)	2c	1c
Ground (lb.)	5c	1c
Cloves (lb.)	3c	2c
Ground (lb.)	6c	2c
Clove stems (lb.)	2c	1c
Ground (lb.)	5c	1c+20%
Cinnamon (lb.)	2c	1c+20%
Ground (lb.)	5c	1c+20%
Coriander seeds (lb.)	½c	Free
Cummin seeds (lb.)	1c	Free
Fennel seed (lb.)	1c	Free
Ginger root (lb.)	2c	1c
Ground (lb.)	5c	1c+20%
Mace (lb.)	4c	8c
Ground (lb.)	8c	8c+20%
Wild mace (lb.)	18c	18c
Ground (lb.)	22c	18c+20%
Mustard seeds, whole (lb.)	1c	Free
Ground or prepared (lb.)	8c	6c
Nutmegs (lb.)	2c	1c
Ground (lb.)	5c	1c+20%
Pepper, capsicum, red, cayenne, paprika, black or white (lb.)	2c	1c
Ground (lb.)	5c	1c+20%
Pimento (lb.)	1c	¾c
Ground (lb.)	3c	¾c+20%
Sage (lb.)	1c	½c
Ground (lb.)	3c	½c+20%

Schedule 8—Spirits, Wines and Other Beverages

Brandy, cordials, bitters, etc. (gal.)	$5	$2.60
Champagne and sparkling wines (gal.)	$6	
per dozen (quarts)		$9.60
Still wines (gal.)	$1.25	45c to 60c
Fruit juices and fruit syrups, ½% alcohol (gal.)	70c	
18% alcohol (gal.)		70c
over 1½% (gal.)	70c+$5 per gal. on alcohol content.	
18% alcohol 70c. gal., and $2.07 per gallon on alcohol content.		
Angostura bitters (proof gal.)	$2.60	$2.60
Malt extract, fluid (proof gal.)	$1	23c or 45c gal.
Solid or condensed	60%	45%
Mineral waters, natural, artificial, N.E.S. (proof gal.)	10c	10-20c doz.

Schedule 13—Papers and Books

Filter masse or filter stock	20%	20%
Decalcomania paper, simplex, not printed (lb.)	5c	Free
In ceramic colors, not over 100 lbs. in weight per 1000 sheets (lb.)	70c+15%	60c
Over 100 lbs. (lb.)	22c+15%	
If backed with metal leaf (lb.)	65c	
All other (lb.)	40c	15c

Schedule 14—Sundries

Bristles, sorted, bunched or prepared (lb.)	7c	7c
Cork, bark, cut (lb.)	8c	4c
Stoppers, over ¾ in. in diam. at larger end, disks, wafers, washers over ⅛ in. thick, natural cork (lb.)	20c	12c
Stoppers less than ¾ in. and disks, etc., less than ⅛ in., natural cork (lb.)	25c	15c
Artificial or composition cork stoppers, disks, etc. (lb.)	10c to 12½c	30%
Amber, bladders or wax manufactures	20%	10%
Moss, sea grass, seaweeds, manufactured	10%	10%
Peat moss (ton)	50c	50c
Emery, corundum, and artificial abrasives, ground, pulverized, refined or manufactured (lb.)	1c	1c
Hair, human, N.E.S.	35%	35%
Raw	10%	10%
Cleaned	20%	20%
Hair press cloth, N.E.S.	35%	15c yd.
Chamois skins	20%	15%
Catgut, whipgut, oriental gut, manufactures thereof, and of wormgut	40%	Free
Sponges	15%	10%
Rosin, violin	15%	10%
Beeswax, white, bleached	25%	Free
All raw or unmanufactured articles not enumerated or N.E.S.	10%	10%
All articles manufactured in whole or in part	20%	15%

Title II

Free List

Schedule 15

Acids and acid anhydrides—Chromic, hydrofluoric, hydrochloric or muriatic, nitric, sulphuric or oil of vitriol, mixtures of nitric and sulphuric, valerianic and all anhydrides of foregoing N. E. S.

Aconite, aloes, asafetida, cocculus indicus, ipecac, jalap, manna, marshmallow or althea root, leaves and flowers, mate and pyrethrum or insect flowers, crude and non-alcoholic.

Albumen, N. E. S.

Antimony ore.

Annatto and all extracts of archil or archil liquid, cochineal, cudbear, gambier, litmus, the foregoing non-alcoholic.

Antitoxins, vaccines, viruses, serums and bacterines for therapeutic use.

Arrowroot, natural.

Arsenic sulphide, arsenious acid or white arsenic.

Asbestos, crude, containing not more than 15 per cent. of foreign matter.

Waste bagging.

Barks, cinchona or other from which quinine may be extracted.

Fish sounds, crude, dried or salted for preservation, N. E. S.

Blood, dried, N. E. S.

Bones—Crude, steamed or ground, dust meal and ash, and animal carbon suitable only for fertilizing purposes.

Borax, crude, and borate of lime, borate of soda and other borate material, crude, N. E. S.

Bristles, crude, not sorted or bunched.

Burgundy pitch.

Cacao beans.

Calcium—Acetate, chloride, crude; nitrate and cyanamid or lime nitrogen; provided, that if any country, dependency, province or other subdivision of government imposes a duty on calcium acetate, when imported from the United States, an equal duty shall be imposed upon such article coming into the United States from such country, dependency, province or subdivision of government.

Cerite, or cerium ore.

Chalk, crude, not ground, bolted, precipitated or otherwise manufactured.

Chromite or chrome ore.

Coal-tar products—Acenaphthene, anthracene having a purity of less than 30 per cent.; benzene, carbazole having a purity of less than 65 per cent.; cumene, cymene, fluorene, methylanthracene, methylnaphthalene, naphthalene which after the removal of all the water present has a solidifying point less than 79 degrees C; pyridine, toluene, xylene, dead or creosote oil, anthracene oil, pitch of coal tar, pitch of blast-furnace tar, pitch of oil-gas tar, pitch of water-gas tar, crude coal tar, crude blast-furnace tar, crude oil-gas tar, crude water-gas tar, all other distillates of any of these tars, which on being subjected to distillation yield in the portion distilling below 190 degrees C. a quantity of tar acids less than 5 per cent. of the original distillate (ruled not to include cresylic acid), all mixtures of any of these distillates, and any of the foregoing pitches, and all other products that are found naturally in coal tar N.E.S.

Cobalt and cobalt ore.

Copper sulphate or blue vitriol, copper acetate and subacetate or verdigris.

Cottonseed oil foots (American origin).

Cryolite.

Metallic mineral substances, crude.

Cork wood and bark, unmanufactured.

Cuttlefish bone.

Cyanide—Potassium, sodium, salts, mixtures, combinations and compounds, N. E. S.

Glass sand (silver sand).

Glaziers' and engravers' diamonds, unset, and miners' diamonds.

Drugs, such as barks, beans, berries, buds, bulbs, bulbous roots, excrescences, fruits, flowers, dried fibers, dried insects, grains, herbs, leaves, lichens, mosses, logs, roots, stems, vegetable, seeds (aromatic, not garden), seeds of morbid growth, weeds and all other drugs of vegetable or animal origin, natural and uncompounded and not edible, N. E. S., non-alcoholic.

Dyeing or tanning materials—Fustic wood, hemlock bark, logwood, mangrove bark, oak bark, quebracho wood, wattle bark, divi-divi, myrobalans fruit, sumac, valonia, nutgalls, and all other articles of vegetable origin used for dyeing, coloring, staining or tanning, non-alcoholic, N. E. S.

Emery and corundum ore and crude artificial abrasives.

Enfleurage greases, floral essences and concretes, unmanufactured and non-alcoholic.

Ferrous sulphate or copperas.

Fish for fertilizer, etc.

Fish skins, raw or salted.

Guano, basic slag, ground or unground, manures and other fertilizer materials, N. E. S.

Gums and resins—Dammar, kauri, copal, dragon's blood, kadaya, sandarac, tragacanth, tragasol, N. E. S.

Hair, animal, unmanufactured, N. E. S.

Hide cuttings, raw, ossein and all other glue stock.

Hoofs, unmanufactured.

Horns, and parts of, unmanufactured.

Iodine, crude.

Iridium, osmium, paldium, rhodium, ruthenium and native combinations thereof, with one another or platinum.

Kelp.

Kieserite.

Lac, crude, seed, button, stick or shell.

Leeches.

Limestone-rock asphalt, asphaltum and bitumen.

Lemon, lime and sour orange juice not containing more than 2 per cent. alcohol.

Manganese from Cuba.

Marrow, crude.

Mineral salts obtained by evaporation from mineral waters.

Minerals, crude.

Moss, seaweeds, and vegetable substances, crude, N.E.S.

Monazite sand and other thorium ores.

Nux vomica.

Oil seeds and nuts—Copra, hempseed, palm nuts, palm nut kernels, tung nuts, rapeseed, perilla, sesame seed, N.E.S., when the oils derived therefrom are free of duty; coconuts from Cuba.

Oil cake and oil-cake meal.

Oils, animal—Spermaceti, whale, fish oils of American fisheries, all fish and products of such fisheries, and cod and cod-liver oil.

Oils, distilled or essential—Anise, bergamot, bitter almond, camphor, caraway, cassia, cinnamon, citronella, geranium, lavender, lemon-grass, lime, lignaloe, neroli, origanum, palmarosa, petitgrain, otto of roses, rosemary, spike lavender, thyme, ylang-ylang; non-alcoholic.

Oils, expressed—Croton, palm, palm kernel, perilla, sesame, sweet almond; olive oil, inedible, tung oils and nut oils, N. E. S.

Oils, mineral—Petroleum and products thereof, N. E. S.

Olive oil foots (sulpured olive oil).

Duplex decalcomania paper, unprinted.

Phosphate, crude, and apatite.

Gypsum, crude.

Platinum unmanufactured.

Potassium chloride, or muriate of potash, potassium sulphate, kainite, wood ashes, beet-root ashes and all crude potash salts, N. E. S.

Potassium nitrate or saltpeter, crude.

Quinine sulphate and all alkaloids and alkaloid salts derived from cinchona bark.

Radium and salts of, and radio-active substitutes.

Rennet.

Sago, crude, and sago flour.

Selenium and salts of.

Sheep dip.

Sodium—Nitrate, sulphate, crude, salt cake and nitre cake.

Spermaceti.

Strontianite and celestite.

Sulphur and sulphur ore.

Tamarinds.

Tapioca, tapioca flour and cassava.

Tar and pitch of wood.

Tin ore and black oxide of tin.

Turmeric.

Turpentine, gum, spirits and rosin.

Uranium, oxide and salts of.

Vegetable tallow.

Wax—Animal, vegetable, mineral, N. E. S.

Bees, bleached, from Cuba.

Whalebone.

Witherite.

Wood charcoal.

Worm gut, unmanufactured.

Zaffer.

51-Year Record of Imports into the United States, 1871-1922

The following tables, compiled from official records, give, wherever figures are obtainable, import data, quantity and value for the years 1871, 1881, 1891, 1901, and from 1913 to 1922 inclusive. Where statistics are missing for any of the years indicated it is due to the fact that official records were not kept and the figures are, therefore, unavailable.

Abrasives, Pumice Stone, Unmanufactured.

	Tons.	Dollars.
1871	.....	6,448
1881	.....	19,052
1891	.....	52,414
1901	.....	28,618
1913	5,558	44,474
1914	7,085	57,427
1915	6,060	47,469
1916	8,650	69,311
1917	7,205	76,620
1918	3,900	34,062
1919	1,139	17,196
1920	10,933	145,984
1921	4,488	64,213
1922	5,728	59,603

Abrasives, Pumice Stone, Wholly or Partially Manufactured.

	Pounds.	Dollars.
1913	3,845,326	17,417
1914	6,484,875	28,280
1915	6,013,747	27,162
1916	5,616,012	44,186
1917	7,796,173	64,865
1918	3,238,776	34,262
1919	1,746,024	23,168
1920	6,303,302	63,853
1921	6,783,635	79,727
1922	3,871,541	28,457

Abrasives, Rottenstone and Tripoli.

		Dollars.
1881	.....	3,848
1891	.....	.....
1901	.....	24,556
1913	.....	30,621
1914	.....	20,858
1915	.....	24,796
1916	.....	38,613
1917	.....	23,315
1918	.....	14,551

Stated separately after 1918.

Abrasives, Rottenstone.

	Tons.	Dollars.
1919	13	1,486
1920	461	6,125
1921	90	4,747
1922	62	4,306

Abrasives, Tripoli.

	Tons.	Dollars.
1919	247	7,232
1920	411	8,483
1921	324	9,423
1922	320	7,918

Acenaphthalene, Cumol, Fluorene, Methyl-anthracene and Methyl-naphthalene

	Pounds.	Dollars.
1920	15,759	946
1921	.....	.....
1922	100	64

Not stated prior to 1920.

Acetone.

	Pounds.	Dollars.
1914	2,760	307
1915	235,917	21,105
1916	179,497	14,424
1917	.....	.....
1918	148,082	26,910
1919	443,504	80,986
1920	.....	.....
1921	6,654	311
1922	155	57

Not stated prior to 1914.

Acetanilid

	Pounds.	Dollars.
1914	1,060	164
1915	800	389
1916	.....	.....
1917	15	22
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	10	16
1922	20	12

Not stated prior to 1914.

Acetphenetidin.

	Pounds.	Dollars.
1915	39,990	27,356
1916	203	1,532
1917	3,280	40,352
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	.....	.....

Not stated prior to 1915.

Acid, Acetic Anhydrid.

	Pounds.	Dollars.
1913	309,643	51,632
1914	150,892	23,240
1915	3,652	1,019
1916	18,177	10,013
1917	9,060	7,485
1918	13,112	16,533
1919	10,948	14,780
1920	.....	.....
1921	.....	.....
1922	.....	.....

Acid, Acetic or Pyroligneous.

	Pounds.	Dollars.
1871	146	120
1881	4,223	942
1891	10,946	1,036
1901	291,801	21,182
1913	39,648	3,036
1914	27,750	1,952
1915	312,850	16,419
1916	504,858	53,969
1917	201,604	28,492
1918	264,997	47,673
1919	1,252,649	224,482
1920	2,925,676	339,178
1921	859,755	108,090
1922	21,774	17,104

Acid, Acetylsalicylic (Aspirin).

	Pounds.	Dollars.
1914	22,841	11,873
1915	112,602	53,792
1916	229	311
1917	501	2,136
1918	1,100	3,300
1919	26	76
1920	.....	.....
1921	.....	.....
1922	.....	.....

Not stated prior to '1914.

Acid, Amidosalicylic

	Pounds.	Dollars.
1920	11,199	8,182
1921	.....	.....
1922	.....	.....

Not stated prior to 1920.

Acid, Arsenic or Arsenious.

	Pounds.	Dollars.
1882	52,572	2,285
1891	.....	.....
1901	497,916	20,486
1913	5,164,768	203,525
1914	3,034,351	110,179
1915	2,789,531	106,530
1916	2,458,694	104,988
1917	1,984,480	159,429
1918	3,746,246	384,964
1919	7,074,429	611,398
1920	5,809,178	414,867
1921	6,733,163	511,098
1922	1,694,142	109,169

Acid, Benzoic.

	Pounds.	Dollars.
1871	.....	5,571
1881	8,813	13,239
1891	.....	.....
1901	262,697	33,667
1913	863,015	133,887
1914	278,896	51,701
1915	132,666	25,442
1916	25,155	79,856
1917	13,547	52,988
1918	2,354	16,390
1919	125	1,114
1920	313	1,461
1921	240	165
1922	11,023	2,847

Acid, Boracic.

	Pounds.	Dollars.
1871	1,204,049	185,477
1881	187,053	15,771
1891	666,865	40,919
1901	648,994	23,485
1913	362,400	13,897
1914	527,201	22,390
1915	401,684	18,002
1916	424,219	22,145
1917	404,210	24,590
1918	195,650	14,087
1919	280,935	31,170
1920	253,958	11,165
1921	227,461	19,049
1922	1,046,926	82,785

Acid, Carbolic

	Pounds.	Dollars.
1871	.....	8,671
1881	115,691	48,691
1891	1,140,924	134,234
1901	1,808,026	260,851

Stated separately for later years.

Acid, Carbolic (Not Phenol).

	Pounds.	Dollars.
1917	495,813	34,355
1918	127,574	11,198
1919	2,021,165	194,589
1920	157,319	13,243
1921	183,709	20,906
1922	315,406	31,675

Not stated prior to 1917.

Acid, Carbolic (Phenol).

	Pounds.	Dollars.
1913	8,345,631	688,771
1914	8,393,216	531,535
1915	3,106,445	179,685
1916	2,246,256	154,841
1917	772,667	56,878
1918	560,276	62,325
1919	95,861	31,963
1920	30	14
1921	1,260	372
1922	.....	361

Acid, Chromic.

	Pounds.	Dollars.
1871	.....	5
1881	124	89
1891	.....	1,742
1901	46,993	9,881
1913	8,522	1,682
1914	7,778	1,220
1915	6,505	1,394
1916	.....	.....
1917	.....	.....
1918	9,512	1,857
1919	.....	.....
1920	.....	.....
1921	1,100	90
1922	3,969	1,289

Acid, Citric.

	Pounds.	Dollars.
1871	184,662	105,816
1881	38,983	19,750
1891	45,197	15,482
1901	74,805	23,039
1913	8,677	2,916
1914	652,210	204,347
1915	722,434	447,131
1916	171,877	107,603
1917	157,528	91,463
1918	196,590	126,066
1919	680,147	632,294
1920	1,621,577	1,426,195
1921	770,331	632,780
1922	1,624,892	609,198

Acid, Fluoric and Hydrofluoric.

	Pounds.	Dollars.
1901	242	15
1913	12	5
1914	305	22
1915	150	11
1916	17	33
1917	.....	.....
1918	1	2
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	.....	.....

Acid, Formic.

	Pounds.	Dollars.
1913	502,985	22,414
1914	1,119,745	48,826
1915	534,895	30,641
1916	131,719	19,627
1917	385,463	95,074
1918	.....	.....
1919	.....	.....
1920	210,021	46,922
1921	413,867	66,775
1922	124,964	11,219

Acid, Gallic.

	Pounds.	Dollars.
1871	50	70
1881	16	31
1891	.....	.....
1901	21,461	9,704
1913	51,326	17,086
1914	61,635	20,429
1915	41,558	14,992
1916	5,101	1,965
1917	.....	.....
1918	8,643	9,708
1919	22	26
1920	.....	.....
1921	.....	.....
1922	7,750	3,291

Acid, Glycerophosphoric, Salts and Compounds.

	Pounds.	Dollars.
1914	24,789	23,066
1915	15,933	17,678
1916	7,668	8,242
1917	5,853	9,249
1918	961	1,884
1919	2,630	6,967
1920	7,143	12,451
1921	8,287	10,229
1922	3,264	2,716

Not stated prior to 1914.

Acid, Hydrochloric or Muriatic.

	Pounds.	Dollars.
1871	.....	3,595
1881	.....	.....
1891	.....	.....
1901	16,278	430
1913	440	14
1914	254,480	1,450
1915	3,532,076	20,884
1916	4,215,491	27,202
1917	1,108,308	8,191
1918	2,254,210	18,449
1919	3,648,095	37,989
1920	4,454,308	56,828
1921	4,101,080	48,584
1922	7,015	491

Acid, Lactic.

	Pounds.	Dollars.
1913	158,754	19,029
1914	276,237	30,423
1915	143,291	26,787
1916	17,845	10,930
1917	100	160
1918	330	544
1919	.....	.....
1920	17,939	6,517
1921	301,784	77,342
1922	682,392	55,027

Acid, Nitric.

	Pounds.	Dollars.
1871	.....	2,278
1881	.....	45
1891	.....	.....
1901	45,857	934
1913	100	8
1914	.....	.....
1915	356,558	17,776
1916	224,699	11,487
1917	13	2
1918	9,444,028	665,071
1919	8,000,867	589,501
1920	.....	.....
1921	47,754	4,180
1922	23,545	1,970

Acid, Oxalic.

	Pounds.	Dollars.
1871	414,044	61,613
1881	833,407	69,908
1891	2,743,222	200,595
1901	5 622,909	300,879
1913	8,046,380	402,960
1914	8,780,857	433,783
1915	4,496,679	262,422
1916	522,549	166,117
1917	1,183,256	527,827
1918	757,555	311,290
1919	456,698	154,041
1920	1,373,550	372,982
1921	1,824,867	482,758
1922	22,715	3,314

Acid, Phosphoric.

	Pounds.	Dollars.
1901	175,910	31,841
1913	504,383	76,907
1914	528,827	63,222
1915	265,193	39,120
1916	71,568	12,937
1917	13,666	4,225
1918	17,711	7,644
1919	6,431	4,186
1920	80,160	27,837
1921	253,700	68,189
1922	197,994	36,941

Acid, Phthalic.

	Pounds.	Dollars.
1901	31,336	17,560
1913	75,695	20,511
1914	63,574	15,597
1915	17,925	4,498
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	.....	.....

Acid, Picric, or Nitro Picric.

	Pounds.	Dollars.
1872	.....	40,119
1881	.....	42,994
1891	.....	.....
1901	31,638	8,554
1913	85,068	18,339
1914	.....	.....
1915	20,094	4,278
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	3,240,500	254,385
1920	.....	.....
1921	.....	.....
1922	.....	.....

Acid, Pyrogallic.

	Pounds.	Dollars.
1901	.....	37,789
1913	9,512	9,278
1914	23,615	20,496
1915	10,564	9,514
1916	169	227
1917	.....	.....
1918	275	547
1919	.....	.....
1920	.....	.....
1921	899	2,694
1922	11	20

Acid, Salicylic.

	Pounds.	Dollars.
1901	222,761	76,786
1913	31,844	6,500
1914	18,821	4,425
1915	82,617	24,408
1916	160	386
1917	5,033	3,114
1918	21,354	20,883
1919	5	2
1920	.....	.....
1921	.....	.....
1922	2,240	1,775

Acid, Silicic.

	Pounds.	Dollars
1901	25	3
1913	121,344	6,486
1914	.....	.....
1915	3,086	586
1916	15	6
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	110	7
1922	210	32

Albumen, Egg, Frozen or Liquid.

	Pounds.	Dollars.
1915	691,081	92,307
1916	1,451,376	201,509
1917	2,989,685	316,762
1918	2,014,620	250,132
1919	1,744,511	197,658
1920	2,875,630	587,368
1921	4,461,999	618,953
1922	3,844,804	475,076

Albumen, Not Otherwise Provided For.

	Pounds.	Dollars.
1913	15,831	3,421
1914	382,589	58,175
1915	258,057	48,041
1916	81,787	25 615
1917	106,200	34,057
1918	671	260
1919	1,242	768
1920	37,030	21,395
1921	7,651	3,707
1922	103,481	31,130

Alcohol, Grain.

	Proof gallons.	Dollars.
1891	8,794	7,623
1901	.....	.....
1913	135,250	22,789
1914	109,830	19,365
1915	40,532	5,707
1916	59,198	7,285
1917	4	8
1918	69	20
1919	290	289
1920	.....	.....
1921	27	34
1922	.....	.....

Alcohol, Methyl or Wood.

	Gallons.	Dollars.
1913	362	387
1914	109,022	42,598
1915	39,485	11,880
1916	46,829	9,496
1917	11,267	4,502
1918	205,276	202,994
1919	4,375	11,141
1920	566	1,956
1921	214,328	525,730
1922	20	31

Alizarin, Natural or Artificial, and Dyes Derived Therefrom.

	Pounds.	Dollars.
1881	.....	898,539
1891	344,402	674,919
1901	4,046,986	713,392
1913	8,219,087	1,824,975
1914	806,764	246,196

Stated as following class after October 3, 1913.

Alizarin and Derivatives, Natural or Synthetic, and Dyes Derived from.

	Pounds.	Dollars.
1914	1,828,074	593,648
1915	5,992,878	1,586,367
1916	71,834	44,282
1917	99,057	127,240

Stated separately after 1917.

Alizarin, Natural.

	Pounds.	Dollars.
1918	115,133	100,773
1919	1,741	5,155
1920	4,943	3,457
1921	77,551	62,404
1922	62,928	116,773

Alizarin, Synthetic.

	Pounds.	Dollars.
1918	19,180	55.179
1919	.....	.....
1920	58,810	18,785
1921	122,246	45.221
1922	36,736	18,510

Alizarin Colors or Color Lakes

	Pounds.	Dollars.
1918	2,540	11,208
1919	6,284	9.121
1920	19.634	17,161
1921	144,076	204,859
1922	61,452	46,411

Alizarin Dyes

	Pounds.	Dollars.
1918	2,759	10,698
1919	4,025	3,397
1920	19,393	9,475
1921	89,011	117,983
1922	328,900	529,302

Imports Into the United States

Alkalies, Alkaloids and Other Chemical Compounds Not Containing Alcohol.

	Pounds.	Dollars.
1919	3,324,626	871,034
1920	6,849,393	1,053,933
1921	9,009,045	1,147,113
1922	18,323,414	1,410,548

Not stated prior to 1919.

Alum, Alum Cake, Patent Alum, Sulphate of Alumina and Aluminous Cake.

	Pounds.	Dollars.
1871	4,712,840	74,450
1881	2,086,950	22,331
1891	4,652,985	58,864
1901	2,120,119	21,179
1913	4,129,160	39,944
1914	4,119,481	47,759
1915	3,904,561	41,166
1916	2,482,663	45,491
1917	1,636,989	56,768
1918	996,798	32,779
1919	220,967	7,915
1920	1,062,041	37,777
1921	3,069,682	71,135
1922	3,795,551	71,721

Alumina, Hydrate of, or Refined Bauxite.

	Pounds.	Dollars.
1901	4,584,477	199,950
1913	2,252,156	37,812
1914	1,639,027	26,328
1915	202,968	3,680
1916	418	260
1917	.....	.....
1918	94,278	7,562
1919	.....	.....
1920	.....	.....
1921	2,549	963
1922	15,816	569

Aluminum, in Crude Form, Scrap and Alloys of Which Aluminum Composes Chief Value.

	Pounds.	Dollars.
1871	.....	341
1881	517	6,071
1891	10,383	15,582
1901	62,342	29,198
1913	26,642,112	4,247,580
1914	16,421,976	2,801,911
1915	13,925,919	2,364,044
1916	8,203,895	1,823,106
1917	1,904,000	558,897
1918	1,503,360	480,782
1919	5,548,784	1,748,691
1920	30,853,386	9,595,122
1921	35,626,274	9,015,422
1922	24,697,080	4,805,767

Acid, Stearic or Stearin.

	Pounds.	Dollars.
1891	.....	2,638
1901	.....	.....
1913	119,619	12,160
1914	100,088	9,593
1915	32,795	3,465
1916	40,979	6,029
1917	538	75
1918	.....	.....
1919	.....	.....
1920	4,044	867
1921	12,662	1,750
1922	25,919	2,170

Acid, Sulphuric, or Oil of Vitriol.

	Pounds.	Dollars.
1871	8,509	642
1881	3,841	276
1891	15,377	836
1901	79,120	2,335
1913	34,624	512
1914	6,725,999	40,559
1915	7,382,139	44,068
1916	6,286,490	61,352
1917	667,008	6,617
1918	2,822,527	358,904
1919	11,339,480	100,489
1920	9,291,723	79,204
1921	10,365,450	93,937
1922	4,915,213	54,727

Acid, Tannic or Tannin.

	Pounds.	Dollars.
1871	21	26
1881	1,041	469
1891	659	239
1901	2,007	1,092
1913	1,540	778
1914	12,892	4,326
1915	49,493	17,047
1916	2,229	684
1917	160	41
1918	5,442	1,424
1919	96,831	41,675
1920	33,458	20,169
1921	46,934	21,735
1922	19,518	8,236

Acid, Tartaric.

	Pounds.	Dollars.
1871	288,525	85,830
1881	64	33
1891	1,511	468
1901	1,068	299
1913	78,942	15,747
1914	848,575	203,850
1915	829,105	273,880
1916	198,873	84,373
1917	268,180	162,478
1918	384,262	231,099
1919	321,256	218,441
1920	798,667	529,231
1921	2,103,131	1,004,349
1922	3,074,283	756,696

Acid, Valerianic.

	Pounds.	Dollars.
1901	1,172	818
1913	1,019	860
1914	1,161	750
1915	2,163	1,774
1916	600	399
1917	50	491
1918	845	5,011
1919	.....	.....
1920	700	2,278
1921	435	1,342
1922	.....	.....

Acids, All Other Not Specially Provided For.

	Pounds.	Dollars.
1871	.....	93,273
1881	.....	350,080
1891	.....	380,054
1901	.....	42,838
1913	.....	86,539
1914	.....	94,075
1915	.....	73,848
1916	.....	36,430
1917	.....	86,257
1918	.....	510,091
1919	14,025	58,915
1920	52,758	25,200
1921	106,746	28,696
1922	226,956	57,361

Quantity not stated prior to 1919.

Aconite.

	Pounds.	Dollars.
1872	19,591	1,586
1881	5,883	455
1891	2,761	266
1901	1,130	113
1913	12,946	1,065
1914	4,267	329
1915	8,821	962
1916	6,720	538
1917	34,285	8,724
1918	475	119
1919	22,320	4,462
1920	31,471	8,881
1921	10,854	2,452
1922	10,645	1,367

Acorns, Raw, but Unground.

	Pounds.	Dollars.
1913	7,165	216
1914	3,613	208
1915	4,395	198
1916	.....	.....
1917	2,420	41
1918	550	36
1919	.....	.....
1920	22,680	900
1921	1,048	98
1922	.....	.....

Agar-Agar.

	Pounds.	Dollars
1914	189,232	54,319
1915	344,119	92,809
1916	332,931	110,410
1917	431,622	162,527
1918	246,988	91,442
1919	338,307	172,832
1920	443,116	247,404
1921	199,584	98,722
1922	417,979	185,139

Not stated prior to 1914.

Albumen, Egg or Blood

	Pounds.	Dollars.
1871	.....	135,017
1881	.....	215,555
1891	.....	119,441
1901	390,314	110,702
1913	1,246,744	406,594
1914	1,574,271	487,905

Stated separately after 1914; see following classes.

Albumen, Egg, Dried.

	Pounds.	Dollars.
1915	1,269,398	402,996
1916	1,670,996	751,976
1917	2,669,254	1,443,936
1918	3,727,998	2,450,143
1919	1,427,240	1,141,431
1920	4,716,241	5,184,229
1921	2,568,240	2,606,352
1922	2,911,347	1,494,659

Aluminum Leaf.

	100 leaves.	Dollars.
1891	9,768	1,109
1901	102	66
1913	3,531	1,811
1914	1,385	141
1915	15,249	1,901
1916	39,920	5,466
1917	19,161	3,706
1918	50,880	11,636
1919	95,475	19,445
1920	118,159	25,572
1921	243,510	65,759
1922	87,359	19,143

Amber, Manufactures of.

		Dollars.
1913	.....	7,202
1914	.....	9,332
1915	.....	4,516
1916	.....	5,436
1917	.....	248
1918	.....	721
1919	.....	78
1920	.....	34,145
1922	.....	9,093

Ambergris (Not Containing Alcohol).

	Pounds.	Dollars.
1881	.....	55
1891	71	3,731
1901	27	4,266
1913	608	10,964
1914	32	695
1915	1	87
1917	160	2,771
1918	204	3,643
1919	494	1,097
1920	48	540
1921	20	916
1922	109	12,655

Amidophenol.

	Pounds.	Dollars.
1919	590	1,475
1920	438	942
1921	14,623	11,699
1922	.....	.....

Not stated prior to 1919.

Ammonia, Carbonate of.

	Pounds.	Dollars.
1871	1,346,448	112,303
1881	315,537	42,363
1891	912,886	62,293
1901	181,701	12,204
1913	258,376	16,173
1914	391,981	25,195
1915	784,821	49,122
1916	357,280	25,018
1917	244,840	18,264
1918	76,160	6,732
1919	85,762	15,757
1920	271,787	32,288
1921	238,820	21,897
1922	742,067	38,605

Ammonia, Liquid Anhydrous.

	Pounds.	Dollars.
1891	14,210	5,870
1901	.....	.....
1913	.....	.....
1914	.....	.....
1915	307	35
1916	.....	.....
1917	200	46
1918	2,698	1,039
1919	.....	.....
1920	12,512	4,305
1921	14,038	6,120
1922	102	48

Ammonia, Muriate of, or Sal Ammoniac.

	Pounds.	Dollars.
1871	1,083,496	79,551
1881	1,281,867	107,976
1891	3,669,583	195,078
1901	4,772,364	245,163
1913	10,387,148	504,330
1914	9,254,539	470,566
1915	4,788,325	241,713
1916	1,965,464	122,174
1917	1,856,696	178,274
1918	1,000,262	97,994
1919	648,961	92,942
1920	5,295,692	563,130
1921	4,502,056	445,705
1922	6,647,610	338,555

Ammonia, Nitrate of.

	Tons.	Dollars.
1914	1,383	132,849
1915	1,637	193,907
1916	.....	.....
1917	87,300	4,015
1918	74,101	4,287
1919	15,755	1,871
1920	18,292,080	1,360,153
1921	28,417,403	1,823,363
1922	44,724,215	2,628,308

Not stated prior to 1914.

Ammonia, Perchlorate of.

	Pounds.	Dollars.
1914	70,253	6,337
1915	72,576	6,515
1916	.....	.....
1917	275	53
1918	405	165
1919	1,768	402
1920	452,356	85,649
1921	4,502,050	413,470
1922	3,888,039	298,780

Not stated prior to 1914.

Ammonia, Phosphate of.

	Pounds.	Dollars.
1913	7,433	493
1914	205,764	13,462
1915	71,782	5,394
1916	810	40
1917	1,000	206
1918	1,316	336
1919	.....	.....
1920	.....	.....
1921	14,232	1,787
1922	27,947	2,980

Ammonia, Sulphate of.

	Tons.	Dollars.
1891	9,950	483,196
1901	14,846	694,454
1913	61,113	3,660,004
1914	83,597	4,900,058
1915	64,417	3,215,139
1916	19,404	1,371,007
1917	8,176	647,271
1918	3,983	467,999
1919	1,964	288,469
1920	2,586	343,107
1921	2,537	226,300
1922	6,356	314,269

Aniline Oil.

	Pounds.	Dollars.
1871	.....	169
1881	69,899	18,556
1891	1,489,908	299,662
1901	1,530,950	143,268
1913	2,015,318	171,047
1914	1,444,772	116,628
1915	1,407,305	240,165
1916	104,836	28,130
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	220	72
1922	11,243	1,799

Aniline Salts.

	Pounds.	Dollars.
1881	.....	66,152
1891	.....	713,732
1901	7,575,515	589,535
1913	4,976,108	371,198
1914	3,083,467	222,728
1915	805,439	130,280
1916	16,084	3,978
1917	.....	.....
1918	21,273	3,250
1919	.....	.....
1920	.....	.....
1921	4	1
1922	18,316	12,109

Annatto, Roucou, Rocoa or Orleans, and All Extracts of.

	Pounds.	Dollars.
1871	.....	32,457
1881	270,597	37,639
1891	696,429	25,724
1901	412,125	13,498
1913	405,024	19,991
1914	507,250	25,341
1915	809,908	53,174
1916	603,271	69,811
1917	669,445	78,017
1918	749,782	73,294
1919	265,059	12,549
1920	917,932	38,927
1921	697,333	25,133
1922	856,731	34,226

Anthracene and Carbazole Derivatives (except oil) and Colors and Dyes Derived Therefrom.

	Pounds.	Dollars.
1917	399,300	426,198
1918	35,733	28,018
1919	65,808	82,720
1920	84,751	120,774

Stated separately after 1920.

Anthracene and Carbazole Derivatives —Colors or Color Lakes

	Pounds.	Dollars.
1921	223,324	493,155
1922	66,547	73,705

Anthracene and Carbazole Derivatives —Dyes

	Pounds.	Dollars.
1921	240,718	211,799
1922	363,736	745,041

Anthracene and Anthracene Oil.

		Dollars.
1914	.....	32,175
1915	.....	49,949
1916	.....	2,551
1917	.....	2,258

Stated separately after 1917; see following classes.

Anthracene.

	Pounds.	Dollars.
1918	.....	.....
1919	95,025	3,008

Stated separately after 1919; see below.

Anthracene, Purity Less Than 25 Per Cent

	Pounds.	Dollars.
1920	7,551	506
1921	197,367	17,012
1922	89,502	687

Not stated prior to 1920.

Anthracene, Purity of 25 Per Cent. or More

	Pounds.	Dollars.
1920	52,439	7,018
1921	822,740	98,448
1922	.....	.....

Not stated prior to 1920.

Anthracene Oil.

	Gallons.	Dollars.
1918	11,900	2,010
1919	11,185	2,260
1920	12,694	3,284
1921	18,405	6,725
1922	8,513	2,659

Anthraquinone

	Pounds.	Dollars.
1920	3,147	2,643
1921	46,327	21,422
1922	93,153	62,445

Not stated prior to 1920.

Antimony Oxide, Salts and Compounds of.

	Pounds.	Dollars.
1913	1,819,323	97,447
1914	2,623,084	248,164
1915	1,797,265	219,605
1916	511,848	109,814
1917	192,099	46,190
1918	37,724	13,744
1919	267,885	11,378
1920	569,052	20,274
1921	315,427	18,256
1922	63,296	5,859

Antipyrine.

	Pounds.	Dollars.
1914	7,686	11,608
1915	606	1,085
1916	222	2,202
1917	6,429	46,110
1918	22,736	92,653
1919	14,487	160,902
1920	15,656	72,556
1921	3,836	16,194
1922	7,096	10,293

Not stated prior to 1914.

Antitoxins, Vaccine Virus, and All Other Animal Serums Used for Therapeutic Purposes.

		Dollars.
1913	.....	5,032
1914	.....	19,019
1915	.....	12,826
1916	.....	8,225
1917	.....	11,460
1918	.....	6,009
1919	.....	6,076
1920	.....	6,907
1921	.....	7,314
1922	.....	2,645

Apatite.

	Tons.	Dollars.
1901	152	2,004
1913	2,930	22,535
1914	92	796
1915	.....	.....
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	29	825
1920	70	2,648
1921	72	2,286
1922	.....	.....

Apricot and Peach Kernels.

	Pounds.	Dollars.
1913	18,769	3,086
1914	17,800	2,862
1915	67,164	3,398
1916	11,926	2,497
1917	250,075	21,430
1918	231,465	16,932
1919	72,228	12,411
1920	22,177	9,051
1921	73,479	12,733
1922	11,217	1,343

Argols or Crude Tartar, or Wine Lees, Crude.

	Pounds.	Dollars.
1871	4,024,731	590,453
1881	13,712,528	2,195,420
1891	21,631,507	2,199,263
1901	29,116,816	2,527,281
1913	29,476,172	2,621,491
1914	5,712,667	545,105

Class dropped under 1913 tariff; see below.

Argols or Crude Tartar, or Wine Lees, Crude or Partly Refined.

	Pounds.	Dollars.
1914	23,810,048	2,654,618
1915	28,814,957	3,122,326
1916	34,002,184	5,233,516
1917	24,142,073	3,886,854
1918	30,304,538	5,312,836
1919	32,399,932	5,336,939
1920	28,578,221	3,282,315
1921	26,569,756	3,042,334
1922	18,744,192	1,216,709

Arrowroot, Unmanufactured.

	Pounds.	Dollars.
1871	592,318	28,889
1881	69,206	8,910
1891	452,960	17,136
1901	64,601	3,908
1913	11,327	888
1914	8,015	316
1915	134	5
1916	5,987	302
1917	30,776	1,613
1918	15,998	2,993
1919	33,752	7,208
1920	1,454,626	73,347
1921	133,361	11,214
1922	1,720	229

Arsenic, and Sulphide of, or Orpiment.

	Pounds.	Dollars.
1871	1,329,693	29,822
1881	2,225,425	54,056
1891	5,343,229	161,367
1901	5,936,629	278,337
1913	8,475,592	354,284
1914	4,148,928	169,614
1915	3,981,661	178,756
1916	2,794,254	122,795
1917	2,373,701	175,811
1918	7,031,028	654,282
1919	7,038,146	503,335
1920	6,470,706	472,710
1921	8,801,293	794,215
1922	7,520,571	471,266

Articles Manufactured in the United States Returned — Quicksilver Flasks or Bottles, and Drums Used in Exporting Acids.

		Dollars.
1913	.....	259,123
1914	.....	280,620
1915	.....	180,676
1916	.....	204,642
1917	.....	168,955
1918	.....	393,523
1919	.....	861,168
1920	.....	855,963
1921	.....	895,725
1922	.....	1,145,102

Imports Into the United States

Artists' Colors, in Tubes, Pans, Cakes, Etc.

		Dollars.
1913	.....	136,894
1914	.....	211,305
1915	.....	186,729
1916	.....	129,653
1917	.....	163,958
1918	.....	91,220
1919	.....	85,860
1920	.....	126,026
1921	.....	236,802
1922	.....	187,635

Asbestos, Unmanufactured.

	Tons.	Dollars.
1881	.....	27,717
1891	.....	308,498
1901	.....	427,333
1913	76,952	1,760,845
1914	76,458	1,678,732
1915	68,087	1,513,631
1916	98,970	2,025,003
1917	115,772	3,944,823
1918	117,183	5,384,735
1919	117,808	6,503,948
1920	122,817	8,087,782
1921	126,195	7,030,040
1922	75,827	2,946,128

Ashes, Wood and Lye of, and Beet Root Ashes.

	Pounds.	Dollars.
1871	.....	40
1881	.....	8,022
1891	.....	42,024
1901	.....	76,306
1913	.....	36,498
1914	.....	27,884
1915	.....	41,522
1916	.....	43,839
1917	.....	55,226
1918	.....	47,932
1919	7,302,539	49,276
1920	8,537,614	44,175
1921	6,212,848	38,609
1922	5,043,755	23,172

Quantity not stated prior to 1919.

Asphaltum and Bitumen, Crude, Except Limestone Rock Asphalt.

	Tons.	Dollars.
1871	1,302	14,760
1881	12,883	95,410
1891	78,039	251,137
1901	501,310	204,810
1913	188,725	750,685
1914	45,876	171,981
1915	79,561	465,717
1916	130,039	700,940
1917	161,622	896,989
1918	139,618	851,638
1919	95,214	595,786
1920	91,503	685,998
1921	128,913	1,307,290
1922	8,099	118,953

Aspirin.

See "Acid, Acetylsalicylic."

Balsam, Balm of Gilead.

	Pounds.	Dollars.
1919	380	9
1920	50	4
1921	160	90
1922	83	25

Not stated prior to 1919.

Balsam Copaiba, Crude.

	Pounds.	Dollars.
1871	96,283	34,114
1881	143,258	67,816
1891	171,834	63,253
1901	212,082	57,018
1913	206,447	66,361
1914	245,435	71,339
1915	273,616	59,921
1916	204,464	70,868
1917	308,545	124,122
1918	373,362	202,847
1919	300,659	130,967
1920	426,071	171,398
1921	260,769	99,792
1922	239,922	42,703

Balsam, Copaiba, Advanced in Value by Any Process.

	Pounds.	Dollars.
1915	74	18
1916	.....	.....
1917	.....	.....
1918	158	110
1919	3,270	1,934
1920	.....	.....
1921	20	50
1922	.....	.....

Not stated prior to 1915.

Balsam, Fir or Canada, Crude.

	Pounds.	Dollars.
1871	.....	3,227
1881	15,510	3,633
1891	34,318	6,858
1901	20,728	5,948
1913	3,691	1,827
1914	13,864	12,505
1915	18,610	14,636
1916	7,113	3,934
1917	4,176	3,897
1918	3,698	1,404
1919	2,344	2,140
1920	2,763	3,570
1921	2,006	3,223
1922	1,455	1,50.

Balsam, Fir or Canada, Advanced in Value by Any Process.

	Pounds.	Dollars.
1915	205	154
1916	10	18
1917	25	43
1918	86	151
1919	35	46
1920	174	301
1921	163	288
1922	30	3

Not stated prior to 1915.

Balsam, Peru, Crude.

	Pounds.	Dollars.
1871	2,237	3,878
1881	6,561	7,539
1891	10,653	13,104
1901	.....	.....
1913	48,996	61,702
1914	25,021	29,701
1915	27,506	32,735
1916	40,657	112,270
1917	58,933	175,355
1918	44,082	115,035
1919	64,879	163,568
1920	57,752	176,788
1921	50,080	98,422
1922	37,328	69,116

Balsam, Peru, Advanced in Value by Any Process.

	Pounds.	Dollars.
1918	570	1,465
1919	726	1,817
1920	.....	.....
1921	.....	.....
1922	.....	.....

Not stated prior to 1918.

Balsam, Styrax or Storax, Crude

	Pounds.	Dollars.
1891	3,432	583
1901	3,325	517
1913	35,861	5,223
1914	5,607	798
1915	11,445	1,550
1916	11,696	5,528
1917	10,892	26,550
1918	14,788	22,616
1919	.....	.....
1920	3,678	3,094
1921	30,445	67,120
1922	7,589	5,159

Balsam, Styrax, or Storax, Advanced in Value by Any Process

	Pounds.	Dollars.
1922	460	346

Not stated prior to 1922.

Balsam, Tolu, Crude

	Pounds.	Dollars.
1871	15,275	6,516
1881	39,995	18,791
1891	54,244	12,264
1901	56,785	12,010
1913	57,277	29,552
1914	42,138	19,063
1915	39,750	13,993
1916	63,579	17,233
1917	62,820	18,255
1918	48,869	23,996
1919	58,194	44,603
1920	83,829	90,974
1921	27,871	23,101
1922	44,359	22,615

Balsam, All Other, Crude

	Pounds.	Dollars.
1871	.....	3,227
1881	.....	315
1891	36,329	5,024
1901	54,994	29,231
1913	46,000	12,149
1914	33,311	12,410
1915	5,999	4,214
1916	2,503	1,312
1917	12,649	4,235
1918	34,773	48,560
1919	42,917	60,338
1920	17,330	8,354
1921	31,149	31,992
1922	45,271	20,657

Barium, Carbonate of, Precipitated

	Pounds.	Dollars.
1913	2,182,517	20,143
1914	4,995,451	46,425
1915	344,588	7,864
1916	6	2
1917	804	177
1918	106,288	1,437
1919	.....	.....
1920	163,509	18,268
1921	1,816,693	45,859
1922	7,806,346	133,185

Barium, Chloride of

	Pounds.	Dollars.
1912	2,926,159	26,341
1914	6,110,386	64,563
1915	4,686,029	60,532
1916	50	10
1917	6,614	608
1918	.....	.....
1919	3,290	783
1920	2,520,321	81,988
1921	2,779,966	113,695
1922	4,905,453	81,713

Barium, Dioxide (Binoxide) of

	Pounds.	Dollars.
1913	3,507,508	215,500
1914	6,085,798	329,139
1915	4,084,144	317,262
1916	546,442	48,451
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	70,862	12,367
1921	684,640	89,138
1922	1,917,379	179,057

Barks, in Crude State, Not Edible

	Pounds.	Dollars.
1901	.....	15,478
1919	400,367	51,274
1920	2,772,957	175,903
1921	4,272,993	242,177
1922	2,627,953	72,092

Not stated prior to 1919.

Bark, Cinchona or Other, from Which Quinine May Be Extracted

	Pounds.	Dollars.
1871	1,286,095	697,547
1881	4,219,403	1,846,280
1891	2,672,364	301,085
1901	4,196,419	781,895
1913	3,329,973	354,593
1914	3,654,968	464,411
1915	3,951,196	561,802
1916	3,967,320	777,637
1917	2,531,397	685,936
1918	3,121,958	779,403
1919	3,866,158	803,081
1920	5,242,724	1,132,874
1921	3,566,010	1,334,758
1922	766,589	276,833

Bark Extracts, for Tanning (Except Hemlock)

	Pounds.	Dollars.
1891	3,310	229
1901	33,934	2,603
1918	4,623,086	170,595
1919	2,928,238	68,861
1920	4,195,625	221,654
1921	6,267,744	380,069
1922	5,071,651	183,670

Not stated prior to 1918.

Bark, Hemlock

	Cords.	Dollars.
1871	.....	98,207
1881	102,932	492,561
1891	57,255	274,426
1901	16,749	65,313
1913	5,502	31,965
1914	4,483	25,655
1915	3,672	19,967
1916	3,388	17,853
1917	1,118	7,027
1918	270	2,624
1919	969	9,716
1920	2,481	29,454
1921	2,838	32,248
1922	3,205	31,492

Bark, Mangrove

	Tons.	Dollars.
1913	17,578	374,566
1914	7,743	191,472
1915	8,326	222,066
1916	21,107	581,190
1917	10,565	297,897
1918	3,529	72,956
1919	2,817	125,603
1920	2,544	109,085
1921	7,156	344,413
1922	1,668	40,857

Baryta, Sulphate of, or Barytes, Unmanufactured

	Tons.	Dollars.
1871	693	9,769
1881	.....	.....
1891	2,112	4,852
1901	2,775	6,959
1913	28,358	63,345
1914	32,550	63,270
1915	9,616	21,087
1916	15	245
1917	.....	.....
1918	5	63
1919	33	245
1920	2,058	10,405
1921	23,238	156,987
1922	9,500	64,763

Baryta, Sulphate of, or Barytes, Manufactured

	Tons.	Dollars.
1891	1,812	19,196
1901	1,802	19,795
1913	4,594	36,819
1914	5,379	42,627
1915	1,755	14,997
1916	.....	2
1917	210	3,813
1918	.....	.....
1919	.....	.....
1920	107	653
1921	509	10,519
1922	1,579	24,440

Bauxite, Crude

	Tons.	Dollars.
1901	16,763	63,597
1913	30,863	119,848
1914	23,576	86,871
1915	12,870	50,557
1916	3,450	17,194
1917	6,403	22,568
1918	2,238	10,045
1919	2,744	10,577
1920	11,748	77,391
1921	59,135	343,909
1922	11,644	52,468

Bay Rum, or Bay Water

	Proof gallons.	Dollars.
1913	685	707
1914	483	629
1915	503	673
1916	335	341
1917	249	278
1918	641	796
1919	1,384	2,716
1920	14,532	13,666
1921	5,700	5,829
1922	12,336	49,718

Beeswax

	Pounds.	Dollars.
1871	16,309	3,902
1881	7,003	1,415
1891	383,725	81,920
1901	217,641	57,219
1913	828,287	254,704
1914	1,412,695	477,745
1915	1,565,538	440,047
1916	2,284,283	618,856
1917	2,711,514	904,557
1918	1,950,513	678,148
1919	2,100,458	783,716
1920	3,919,810	1,354,782
1921	2,215,332	693,551
1922	3,100,971	580,723

Beet Pulp, Dried

	Pounds.	Dollars
1920	26,531,967	537,965
1921	70,728,443	1,168,627
1922	10,878,161	79,934

Not stated prior to 1920.

Benzaldehyde

	Pounds.	Dollars.
1919	955	716
1920	32,998	23,002
1921	2	4
1922	1,056	465

Not stated prior to 1919.

Benzol

	Pounds.	Dollars.
1917	3,175,906	273,108
1918	3,073,948	216,640
1919	1,509,861	38,209
1920	170,519	2,547
1921	1,717,936	42,537
1922	458,949	9,651

Not stated prior to 1917.

Benzylchloride

	Pounds.	Dollars.
1920	1,150	452
1921	.....	.....
1922	.....	.....

Not stated prior to 1920.

Binitrotoluol (Dinitrotoluol)

	Pounds.	Dollars.
1917	110,461	13,612
1918	34,930	5,726
1919	2,428	461
1920	4,468	870
1921	5,856	1,371
1922	.....	.....

Not stated prior to 1917.

Bismuth (Metal)

	Pounds.	Dollars.
1871	.....	47,047
1881	.....	83,209
1891	116,174	210,747
1901	156,782	251,284
1913	151,030	257,176
1914	133,190	241,448
1915	34,237	72,587
1916	64,281	155,928
1917	88,465	196,113
1918	75,611	207,098
1919	76,539	218,376
1920	75,781	97,489
1921	96,692	159,670
1922	97,470	158,760

Blanco Polish

		Dollars.
1913	.....	21,854
1914	.....	17,997
1915	.....	17,743
1916	.....	21,299
1917	.....	53,458
1918	.....	24,821
1919	.....	18,953
1920	.....	36,387
1921	.....	17,999
1922	.....	17,785

Blanc Fixe, or Artificial Sulphate of Barytes, and Satin White or Artificial Sulphate of Lime

	Pounds.	Dollars.
1871	147,464	5,910
1881	11,330	2,027
1891	173,772	3,207
1901	2,328,523	28,481
1913	4,808,726	58,499
1914	4,732,474	60,541
1915	2,233,369	25,748
1916	492,723	11,523
1917	408,163	10,029
1918	179,200	2,376
1919	1,285	90
1920	41,108	1,267
1921	1,090,364	19,291
1922	3,651,152	55,643

Bleacher's Blue

		Dollars.
1913	.....	4,143
1914	.....	14,922
1915	.....	14,125
1916	.....	14,922
1917	.....	19,048
1918	.....	5,166
1919	.....	5,167
1920	.....	2,433
1921	.....	2,491
1922	.....	5,069

Bloodchar

	Pounds.	Dollars.
1913	2,954	333
1914	26,674	1,789
1915	14,167	1,196
1916	15	16
1917	.....	.....
1918	.....	.....
1919	10,732	441
1920	.....	.....
1921	101,787	1,735
1922	69	2

Blood, Dried

	Pounds.	Dollars.
1871	.....	676
1881	.....	.....
1891	.....	1,594
1901	.....	138
1914	.....	391,947
1915	.....	227,648
1916	.....	196,600
1917	.....	379,067
1918	.....	479,518
1919	14,281,776	518,630
1920	18,457,336	678,048
1921	7,412,909	290,609
1922	15,085,485	337,349

Quantity not stated prior to 1919.

Blues, Such as Berlin, Prussian, Chinese, Etc., in Pulp, Dry or Ground In, or Mixed With Oil or Water

	Pounds.	Dollars.
1871	19,185	7,133
1881	47,031	8,859
1891	181,451	48,074
1901	154,753	40,234
1914	275,174	50,149
1915	547,299	112,904
1916	185,294	110,901
1917	373,074	209,524
1918	13,867	15,009
1919	8,222	5,879
1920	297,256	120,726
1921	275,757	124,284
1922	20,617	7,113

Bone Black, Lamp Black, Etc.

	Pounds.	Dollars.
1891	.....	32,926
1901	.....	47,946
1913	.....	31,056
1914	.....	27,604
1915	.....	24,459
1916	.....	2,396
1917	.....	6,388
1918	.....	279
1919	69,977	5,118
1920	318,272	20,663
1921	439,136	28,757
1922	518,809	25,717

Quantity not stated prior to 1919.

Bone Char, or Bone Black, Not Suitable for Use as Pigment

		Dollars.
1901	.....	2,082
1913	.....	12,484
1914	.....	77,717
1915	.....	120,715
1916	.....	86,724
1917	.....	80,163
1918	.....	11,865
1919	.....	69,813
1920	.....	312,330
1921	.....	433,712
1922	.....	80,812

Bones, Crude

	Pounds.	Dollars.
1871	.....	27,183
1881	.....	312,697
1891	.....	332,911
1901	.....	353,184
1913	.....	565,566
1914	.....	829,730
1915	.....	756,015
1916	.....	755,700
1917	.....	826,142
1918	.....	1,010,871
1919	26,275,886	369,583
1920	94,593,269	1,506,142
1921	155,409,170	2,526,323
1922	41,202,190	450,649

Quantity not stated prior to 1919.

Bone Dust, or Animal Carbon and Ash, Fit Only for Fertilizer

	Tons.	Dollars.
1881	.....	19,666
1891	6,614	122,717
1901	2,185	38,097
1913	33,919	818,307
1914	41,446	1,036,493
1915	23,440	584,748
1916	20,595	527,079
1917	14,805	383,547
1918	8,428	285,882
1919	3,970	92,588
1920	6,867	248,176
1921	27,413	1,417,886
1922	18,234	495,445

Borax, Crude

	Pounds.	Dollars.
1871	5	1
1881	.....	.....
1891	82,642	9,050
1901	501,137	18,291
1913	11,768	882
1914	686	93
1915	.....	.....
1916	.....	.....
1917	83	3
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	6,854,490	107,788

Borax, Refined

	Pounds.	Dollars.
1871	134,927	20,705
1881	4,136	866
1891	10,725	1,062
1901	.....	.....
1914	4,522	641
1915	2,265	314
1916	682	112
1917	614	109
1918	2	1
1919	478	166
1920	30,334	2,423
1921	226,469	12,505
1922	767	255

Imports Into the United States

Bort

		Dollars.
1871	.....	17
1881	.....	51,409
1891	.....	142,818
1901	.....	785,926
1913	.....	94,043
1914	.....	86,717
1915	.....	71,548
1916	.....	54,974
1917	.....	156,983
1918	.....	292,959
1919	.....	676,095
1920	.....	3,591,776
1921	.....	1,037,852
1922	.....	1,047,894

Bottle Caps, Collapsible Tubes and Sprinkler Tops, Not Decorated

		Dollars.
1913	.....	24,123
1914	.....	50,425
1915	.....	28,429
1916	.....	15,106
1917	.....	13,899
1918	.....	9,607
1919	.....	27
1920	.....	741
1921	.....	1,789
1922	.....	6,255

Bottle Caps, Collapsible Tubes and Sprinkler Tops, Decorated, Etc.

		Dollars.
1913	.....	203,357
1914	.....	547,034
1915	.....	214,522
1916	.....	178,081
1917	.....	190,864
1918	.....	55,532
1919	.....	11,118
1920	.....	74,551
1921	.....	46,733
1922	.....	94,154

Bristles.

1871	581,429	721,518
1881	891,877	955,118
1891	1,522,115	1,502,827
1901	50,449	21,983

Stated separately for later years.

Bristles, Crude, Not Sorted, Bunched or Prepared.

	Pounds.	Dollars.
1913	18,913	13,306
1914	27,036	25,280
1915	45,467	3,336
1916	92,300	15,239
1917	128,894	52,431
1918	33,483	44,145
1919	45,754	64,062
1920	100,737	148,938
1921	86,203	275,747
1922	5,816	11,032

Bristles, Sorted, Bunched, or Prepared.

	Pounds.	Dollars.
1861	1,543,486	1,412,563
1913	3,479,666	3,319,904
1914	3,551,081	3,255,554
1915	3,726,625	3,348,533
1916	3,514,309	3,456,452
1917	4,456,284	4,678,801
1918	3,873,252	4,643,042
1919	3,358,111	4,599,516
1920	4,109,222	8,203,803
1921	4,008,241	8,534,333
1922	3,238,475	4,629,841

Bromin

	Pounds.	Dollars.
1922	300	84

Not stated prior to 1922.

Bronze, or Dutch Metal, in Leaf.

	100 leaves.	Dollars.
1871	.....	15,492
1881	.....	45,307
1891	.....	183,249
1901	983,371	87,864
1913	763,071	104,329
1914	792,578	110,316
1915	896,038	110,163
1916	291,396	38,559
1917	306,497	81,277
1918	473,835	136,394
1919	158,516	38,114
1920	246,944	71,535
1921	219,857	58,447
1922	158,028	32,586

Bronze Powder, Brocades, Flitters and Metallics.

	Pounds.	Dollars.
1891	130,367	19,555
1901	1,960,025	611,467
1913	1,405,502	420,308
1914	1,403,091	406,249
1915	1,063,206	288,054
1916	161,409	96,852
1917	524,032	283,976
1918	61,785	34,153
1919	11,099	5,093
1920	138,253	82,294
1921	745,041	288,435
1922	1,167,005	293,968

Brown, Spanish, Indian Red and Colcothar, or Oxide of Iron.

	Pounds.	Dollars.
1871	.....	40,663
1881	.....	30,195
1891	.....	25,780
1901	.....	66,251
1913	.....	103,604
1914	.....	186,476
1915	.....	183,033
1916	.....	221,209
1917	.....	292,122
1918	.....	233,516
1919	9,791,019	280,076
1920	11,277,278	362,288
1921	16,656,187	523,366
1922	17,936,324	589,329

Quantity not stated prior to 1919.

Brown, Vandyke, Cassel Earth or Cassel Brown.

	Pounds.	Dollars.
1881	.....	6,451
1891	.....	106
1901	.....	.....
1913	.....	1,381
1914	.....	2,663
1915	.....	1,497
1916	.....	365
1917	.....	2,534
1918	.....	854
1919	33,600	2,573
1920	373,456	21,181
1921	417,875	13,314
1922	327,400	7,514

Quantity not stated prior to 1919.

Brushes, Feather Dusters and Hair Pencils.

		Dollars.
1871	.....	222,188
1881	.....	439,856
1891	.....	858,821
1901	.....	1,134,396
1913	.....	2,074,141
*1914	.....	563,160

*Figures cover period from July 1 to October 3, 1913.
Stated separately after October 3, 1913.

Brushes.

		Dollars.
1914	.....	1,605,964
1915	.....	1,667,239
1916	.....	1,309,423
1917	.....	2,188,034
1918	.....	2,979,414

Stated separately after 1918.

Brushes, Toilet, Comprising Hair, Nail or Hand

	Number.	Dollars
1919	43,835,308	2,208,099
1920	41,980,389	3,004,436
1921	34,442,124	3,162,492
1922	28,379,384	1,774,798

Brushes, Hair Pencils

	Number.	Dollars.
1919	401,262	5,349
1920	934,468	9,603
1921	2,072,143	33,349
1922	3,046,264	22,495

Brushes, All Other.

	Number.	Dollars
1919	7,899,454	205,327
1920	7,064,346	196,768
1921	12,747,257	586,508
1922	9,617,492	368,599

Buchu Leaves

	Pounds.	Dollars.
1871	71,524	7,530
1881	93,850	14,012
1891	.....	1,314
1901	.....	22,938
1913	105,310	114,332
1914	125,368	130,352
1915	120,704	115,689
1916	94,520	85,452
1917	100,809	85,807
1918	50,685	42,434
1919	85,303	80,578
1920	86,535	138,843
1921	93,757	182,722
1922	67,506	44,974

Cadmium.

	Pounds.	Dollars.
1881	.....	1,131
1891	.....	678
1901	.....	5,715
1913	1,000	1,508
1914	1,543	1,239
1915	264	278
1916	5	6
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	101	216
1922	.....	.....

Caffeine.

	Pounds.	Dollars.
.....	15,543	45,446
1913	59,773	211,361
1914	80,350	269,323
1915	54,323	186,557
1916	1,267	15,228
1917	1,601	17,219
1918	6,471	64,529
1919	2,092	26,383
1920	2,092	14,884
1921	2,574	12,769
1922	8,519	34,655

Caffeine Compounds.

		Dollars.
1914	.....	9,712
1915	.....	4,071
1916	.....	605
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	44
1922	.....	1,195

Not stated prior to 1914.

Calcium, Acetate, Chloride, Carbide and Nitrate.

	Pounds.	Dollars.
1871	.....	80,000
1881	.....	.....
1891	.....	.....
1901	.....	.....
1914	.....	53,455
1915	.....	1,208,394
1916	.....	3,206,369
1917	.....	3,808,281
1918	.....	3,422,190
1919	74,915,529	2,920,293
1920	76,847,476	2,911,179
1921	111,261,888	4,466,039
1922	47,607,755	1,775,973

Quantity not stated prior to 1919.

Calcium Cyanamid or Lime Nitrogen.

	Tons.	Dollars.
1913	14,656	777,774
1914	29,536	1,500,004
1915	20,564	919,574
1916	38,023	1,633,360
1917	44,146	1,951,104
1918	43,070	2,207,475
1919	46,149	2,705,475
1920	84,678	5,534,716
1921	34,702	2,443,450
1922	21,643	1,111,375

Calcium, Metal

	Pounds.	Dollars.
1920	21,648	3,937
1921	2,269	2,692
1922	3,684	682

Not stated prior to 1920.

Calcium, Tartrate, Crude.

	Pounds.	Dollars.
1914	118,256	8,849
1915	1,755,954	161,566
1916	1,101,255	135,638
1917	371,910	51,418
1918	118,355	19,715
1919	.....	.....
1920	212,519	27,235
1921	54,851	809
1922	218,000	12,080

Not stated prior to 1914.

Calomel, Corrosive Sublimate and Other Mercurial Medicinal Preparations.

		Dollars.
1871	.....	3,147
1881	.....	5,640
1891	.....	5,244
1901	.....	15,931
1913	.....	42,728
1914	.....	37,589
1915	.....	25,694
1916	.....	13,158
1917	.....	9,974
1918	.....	2,124
1919	.....	915

Stated separately after 1919.

Calomel

	Pounds.	Dollars.
1920	3,026	3,254
1921	720	1,029
1922	2,581	1,876

Capsicum, or Red Pepper, Ground or Unground

	Pounds.	Dollars.
1913	4,022,755	412,823
*1914	984,716	130,076

*Figures are for July 1 to October 3, 1913. Stated separately after October 3, 1913. See under Pepper.

Corrosive Sublimate

	Pounds.	Dollars.
1920	3,306	2,258
1921	665	683
1922	.....	.....

Other Mercurial Medicinal Preparations

	Pounds.	Dollars.
1920	3,118	3,991
1921	6,989	8,326
1922	1,967	1,424

Camomile Flowers.

	Pounds.	Dollars.
1881	.....	11,761
1891	.....	9,463
1901	.....	34,035
1913	.....	14,176
1914	.....	6,252
1915	.....	13,113
1916	.....	27,810
1917	.....	64,432
1918	.....	41,886
1919	72,404	14,394
1920	336,397	91,515
1921	167,700	36,893
1922	38,124	7,653

Quantity not stated prior to 1919.

Camwood.

	Tons.	Dollars.
1881	308	27,513
1891	3	229
1901	.....	.....
1913	½	191
1914	.....	.....
1915	1	209
1916	80	5,991
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	1	131

Candle Pitch or Tar, and Palm or Other Vegetable Stearin.

	Pounds.	Dollars
1891	.....	13,411
1901	.....	4,837
1913	3,047,020	56,970
1914	2,203,222	40,004
1915	1,262,725	23,400
1916	853,140	21,596
1917	467,958	14,446
1918	103,349	7,063
1919	.....	.....
1920	160,050	40,795
1921	5,000	767
1922	40,826	2,025

Candles and Tapers, Wax and Other.

	Pounds.	Dollars.
1871	16,018	5,894
1881	10,999	3,237
1891	19,842	3,968
1901	26,272	5,651
1913	.....	22,990
1914	.....	14,348
1915	.....	8,638
1916	.....	9,118
1917	.....	4,515
1918	.....	3,916
1919	28,384	6,708
1920	28,459	8,365
1921	34,991	9,369
1922	76,715	13,726

Cantharides.

	Pounds.	Dollars.
1871	20,803	20,539
1881	16,008	11,087
1891	5,787	4,256
1901	22,800	9,435
1914	5,648	4,435
1915	14,047	12,266
1916	32,603	26,923
1917	25,625	47,857
1918	5,949	6,677
1919	5,289	10,270
1920	10,159	12,269
1921	4,573	5,196
1922	2,953	3,026

Carbazole

	Pounds.	Dollars.
1920	259	108
1921	.....	.....
1922	8,820	3,865

Not stated prior to 1920.

Carbon Tetrachloride.

	Pounds.	Dollars.
1914	572,910	28,300
1915	342,854	18,139
1916	.....	.....
1917	2	2
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	144,472	3,956

Cassia Buds, Unground.

	Pounds.	Dollars.
1871	22,003	6,554
1881	64,199	9,897
1891	129,317	13,914
1901	6,545	1,366
1914	173,449	10,101
1915	193,332	10,394
1916	197,056	14,586
1917	218,563	14,131
1918	173,202	16,271
1919	284,140	52,853
1920	211,688	23,399
1921	152,185	17,429
1922	793,701	45,098

Cassia Buds, Ground.

	Pounds.	Dollars.
1871	2,460	387
1881	.....	.....
1891	.....	.....
1901	.....	.....
1917	139,224	21,672
1918	5,400	844
1919	200	20
1920	.....	.....
1921	24,800	7,753
1922	.....	.....

Not stated where figures are not given.

Cassia, and Cassia Vera, Unground.

	Pounds.	Dollars.
1871	1,632,646	291,972
1881	1,987,052	297,106
1891	3,611,621	137,591
1901	3,364,336	297,478
1914	5,216,426	358,218
1915	5,658,154	348,598
1916	7,487,156	493,161
1917	9,019,350	803,079
1918	5,817,554	420,341
1919	6,581,061	546,194
1920	8,102,110	858,667
1921	5,850,438	622,260
1922	9,981,916	587,018

Castor or Castoreum.

	Ounces.	Dollars.
1871	.....	5
1881	.....	62
1891	5,247	1,343
1901	527	232
1914	6,338	3,408
1915	13,035	5,344
1916	19,657	6,694
1917	24,427	8,250
1918	28,578	7,961
1919	21,067	6,941
1920	31,534	10,378
1921	8,288	2,385
1922	22,985	4,657

Castor Beans or Seeds.

	Bushels.	Dollars.
1871	36,853	44,393
1881	36,540	34,770
1891	105,374	120,202
1901	191,288	255,594
1914	1,043,928	1,154,085
1915	924,605	993,580
1916	1,071,969	1,555,465
1917	767,075	1,185,775
1918	1,202,488	2,842,206
1919	627,535	2,188,256
1920	1,404,550	3,633,693
1921	663,031	1,343,521
1922	1,554,916	2,046,377

Catgut, Whipgut or Wormgut, Unmanufactured.

	Pounds.	Dollars.
1891	.....	246,450
1901	.....	1,834
1914	.....	123,551
1915	.....	198,081
1916	.....	253,678
1917	.....	316,401
1918	.....	216,810
1919	24,813	328,796
1920	23,197	172,662
1921	47,440	324,058
1922	46,988	274,199

Quantity not stated prior to 1919.

Catgut, Whipgut or Wormgut, Manufactures of.

		Dollars.
1881	.....	194,132
1891	.....	13,451
1901	.....	77,532
1914	.....	62,466
1915	.....	68,492
1916	.....	9,790
1917	.....	4,867
1918	.....	8,602
1919	.....	14,446
1920	.....	8,001
1921	.....	21,170
1921	.....	6,850

Cellophone (Manufacture of Cellulose).

		Dollars.
1918	.....	5,046
1919	.....	10,761
1920	.....	6,585
1921	.....	31,847
1922	.....	12,957

Not stated prior to 1918.

Celery Seed.

	Pounds.	Dollars.
1914	405,738	86,809
1915	639,673	117,475
1916	607,581	161,839
1917	755,532	142,164
1918	167,684	65,563
1919	318,544	182,810
1920	938,027	314,160
1921	386,786	50,377
1922	763,966	139,273

Cement, Keene's, or Other, of Which Gypsum Is Component Material of Chief Value.

	Tons.	Dollars.
1914	1,225	19,290
1915	886	11,310
1916	520	8,736
1917	468	8,530
1918	305	6,362
1919	89	3,024
1920	197	5,976
1921	216	8,736
1922	186	5,788

Cement, Portland, White, Non-staining

	Tons.	Dollars.
1920	639	24,652
1921	1	31
1922	.....	.....

Not stated prior to 1920.

Cement, Roman, Portland and Other Hydraulic.

	100 pounds.	Dollars.
1871	.....	52,103
1881	.....	441,512
1891	10,905,989	3,970,565
1901	6,282,158	2,164,556
1913	313,092	124,395
1914	374,471	163,460
1915	342,292	132,864
1916	19,960	9,182
1917	4,196	2,029
1918	8,426	6,020
1919	32,135	51,063
1920	815,812	441,522
1921	1,317,177	965,591
1922	480,809	330,671

Chalk, Unmanufactured.

	Tons.	Dollars.
1871	18,248	42,750
1881	51,546	52,784
1891	73,772	51,845
1901	.....	.....
1913	150,010	120,049
1914	128,947	102,907
1915	120,225	91,188
1916	131,968	95,861
1917	143,216	131,385
1918	167,391	120,792
1919	84,539	117,796
1920	112,292	179,543
1921	123,672	233,408
1922	78,084	123,123

Imports Into the United States

Chalk, When Ground Precipitated, or Otherwise Prepared, Including Tailor's, Billiard, Red or French.

			Dollars.
1871	.....	.....	4,663
1881	.....	.....	3,851
1891	.....	.....	18,643
1901	.....	.....	.....
1913	.....	.....	79,731
1914	.....	.....	52,656
1915	.....	.....	36,621
1916	.....	.....	46,135
1917	.....	.....	39,319
1918	.....	.....	42,390
1919	.....	.....	28,265

Stated as following classes after 1919:—

Chalk, Ground or Bolted

	Pounds.	Dollars.
1881	.....	.....
1891	.....	4,262
1901	.....	.....
1920	932,578	23,863
1921	2,390,250	58,184
1922	2,801,289	70,090

Chalk, Precipitated, for Medicinal or Toilet Purposes

	Pounds.	Dollars.
1881	.....	.....
1891	433,736	18,643
1901	.....	.....
1920	1,021,885	27,899
1921	328,073	9,952
1922	95,170	1,779

Chamois Skins.

			Dollars.
1913	.....	.....	149,057
1914	.....	.....	107,324
1915	.....	.....	64,267
1916	.....	.....	108,346
1917	.....	.....	176,578
1918	.....	.....	86,923
1919	.....	.....	7,950
1920	.....	.....	61,689
1921	.....	.....	74,454
1922	.....	.....	82,150

Charcoal.

	Pounds.	Dollars.
1913	.....	25,557
1914	.....	60,266
1915	.....	39,978
1916	.....	45,174
1917	.....	73,583
1918	.....	10,915
1919	1,355,812	42,548
1920	4,722,508	83,329
1921	6,107,968	90,411
1922	1,244,176	14,630

Quantity not stated prior to 1919.

Chemicals, Drugs and Medicines in Capsules, Pills, Tablets or Similar Forms.

			Dollars.
1919	.....	.....	305,505
1920	.....	.....	449,497
1921	.....	.....	652,998
1922	.....	.....	616,882

Not stated prior to 1919.

Chestnut Extract for Tanning, Not Containing Alcohol

	Pounds.	Dollars.
1922	2,420	116

Not stated prior to 1922.

Chicory Root, Raw but Unground.

	Pounds.	Dollars.
1913	2,203,057	32,939
1914	1,580,925	22,028
1915	471,966	6,717
1916	.....	.....
1917	241,299	29,131
1918	4,577	501
1919	.....	.....
1920	1,526,306	82,989
1921	6,052,078	391,923
1922	292	70

Chicory Root, Burnt or Roasted, Ground or Granulated.

	Pounds.	Dollars.
1913	469,301	19,365
1914	765,056	31,988
1915	409,234	13,991
1916	5,657	260
1917	111,972	8,252
1918	824	97
1919	25	8
1920	816,287	54,244
1921	1,085,078	85,495
1922	157,965	12,838

China Clay, or Kaolin.

	Tons.	Dollars.
1881	6,887	66,654
1891	33,706	232,699
1901	105,198	701,790
1913	263,838	1,735,822
1914	241,936	1,590,654
1915	230,484	1,506,555
1916	228,936	1,376,990
1917	206,729	1,212,099
1918	192,705	1,303,668
1919	146,260	1,436,786
1920	213,713	2,481,396
1921	247,267	2,805,865
1922	192,661	2,037,912

Chloral Hydrate.

	Pounds.	Dollars.
1901	4,485	2,993
1913	.....	.....
1914	644	241
1915	112	25
1916	1	2
1917	.....	.....
1918	1,057	1,509
1919	.....	.....
1920	.....	.....
1921	1,850	1,711
1922	55	57

Chloroform.

	Pounds.	Dollars.
1871	62	107
1881	50	33
1891	.....	.....
1901	259	79
1913	942	1,643
1914	2,444	990
1915	26	43
1916	.....	.....
1917	.....	.....
1918	1	1
1919	54	40
1920	2	4
1921	.....	.....
1922	4,512	615

2,274 pounds of the 1914 figures were valued at only 25 cents a pound; 170 pounds at $2.48 per pound.

Chlorophyll, Extract of.

	Pounds.	Dollars.
1912	4,461	3,586
1913	7,508	8,544
1914	10,125	8,503
1915	3,490	3,671
1916	190	192
1917	.....	.....
1918	199	163
1919	363	511
1920	8	14
1921	1,248	2,242
1922	2,751	3,517

Chrome or Chromium and Ferrochrome Metal

	Tons.	Dollars.
1913	522	89,291
1914	208	25,976
1915	81	6,943
1916	10	1,998
1917	10	1,851
1918	.....	.....
1919	.....	.....
1920	2,553,255	279,894
1921	2,945,624	315,504
1922	985,243	115,723

Quantity stated in pounds after 1919.

Chrome, Yellow or Green, and All Other Chromium Colors.

	Pounds.	Dollars.
1891	76,601	11,194
1901	133,029	19,994
1913	148,299	23,405
1914	134,460	22,412
1915	124,638	21,171
1916	27,929	5,586
1917	28,078	4,202
1918	1,310	459
1919	5,127	2,074
1920	84,799	19,164
1921	322,050	23,894
1922	14,835	3,954

Chromium, Hydroxide, Crude.

			Dollars.
1914	.....	.....	5,859
1915	.....	.....	12,444

No imports since 1915.

Cinchona Bark, Alkaloids or Salts of, Except Sulphate of Quinia.

	Ounces.	Dollars.
1891	112,013	20,977
1901	817,315	289,630
1913	648,865	131,692
1914	452,292	117,915
1915	203,350	66,004
1916	231,100	82,167
1917	623,947	324,438
1918	3,131,958	769,403
1919	1,147,102	272,631
1920	1,112,598	268,500
1921	1,666,688	504,489
1922	766,582	276,833

Cinchonidia.

	Ounces.	Dollars.
1891	156,229	3,856
1901	28,000	9,465
1913	309,395	43,680
1914	205,006	19,502
1915	69,487	8,223
1916	131,481	15,814
1917	221,272	17,560
1918	86,482	20,708
1919	86,000	25,295
1920	40,188	11,065
1921	89,844	35,558
1922	92,688	55,486

Cinnamon, and Chips of, Unground.

	Pounds.	Dollars.
1871	21,932	12,147
1881	10,397	3,853
1891	38,671	4,537
1901	483,992	77,685
1913	1,405,832	188,267
1914	303,967	44,304
1915	528,254	74,081
1916	410,594	50,026
1917	564,248	77,272
1918	686,466	111,004
1919	537,119	99,881
1920	697,183	143,254
1921	524,111	138,660
1922	415,863	66,867

Civet.

	Ounces.	Dollars.
1801	3,952	6,294
1901	4,397	9,473
1913	11,269	15,557
1914	2,761	3,978
1915	1,820	2,086
1916	9,600	12,099
1917	9,250	13,148
1918	9,766	11,877
1919	15,315	17,253
1920	10,554	12,048
1921	8,662	16,877
1922	13,545	18,684

Clay, Common Blue, for Manufacturing Crucibles, Etc.

	Tons.	Dollars.
1891	2,965	38,621
1901	5,423	67,765
1913	23,213	211,905
1914	20,587	180,524
1915	12,274	107,146
1916	3,488	16,088
1917	412	2,353
1918	64	869
1919	80	493
1920	2,456	62,507
1921	4,564	98,029
1922	708	15,376

Clay, Gross Almerode Glass Pot Clay

	Tons.	Dollars.
1920	755	24,207
1921	1,203	29,514
1922	2,524	41,705

Not stated prior to 1920.

Clay, Plasticene and Other Modeling.

	Pounds.	Dollars.
1913	.....	8,519
1914	.....	9,424
1915	.....	6,541
1916	.....	7,978
1917	.....	12,468
1918	.....	7,083
1919	37,875	6,025
1920	84,092	12,162
1921	139,475	22,150
1922	90,569	13,958

Quantity not stated prior to 1919.

Clays or Earths, Not Specially Provided For.

	Tons.	Dollars.
1871	12,160	103,144
1881	12,444	123,545
1891	19,582	154,518
1901	25,146	144,050
1913	37,370	167,614
1914	37,572	210,574
1915	36,072	153,041
1916	34,677	148,916
1917	30,942	138,171
1918	24,474	144,666
1919	23,199	199,532
1920	23,324	200,868
1921	41,250	366,303
1922	30,024	273,257

Cloves, Unground.

	Pounds.	Dollars
1871	1,137,896	64,547
1881	1,046,911	310,543
1891	2,510,066	284,181
1901	2,120,386	170,068
1913	2,734,092	481,751
1914	5,054,621	597,310
1915	5,346,665	595,546
1916	7,066,237	791,708
1917	3,867,851	532,345
1918	5,521,919	1,166,879
1920	6,730,252	2,101,971
1919	3,841,197	1,072,137
1921	4,124,623	1,146,930
1922	6,013,990	1,267,248

Clove Stems, Unground.

	Pounds.	Dollars.
1871	52,446	1,452
1881	118,968	8,435
1891	425,137	8,660
1901	295,696	8,271
1913	32,830	1,333
1914	268	20
1915	4,391	760
1916	57,160	4,009
1917	1,120	174
1918	46,432	6,990
1919	.....	.....
1920	2,965,811	356,363
1921	914,115	61,796
1922	169,515	9,000

Coal-Tar Colors or Dyes Not Specially Provided For.

	Pounds.	Dollars.
1871	.....	276,889
1881	.....	1,208,553
1891	.....	1,632,642
1901	.....	342,116
1913	.....	6,902,065
1914	.....	7,537,924
1915	.....	5,858,509
1916	.....	2,097,924
1917	.....	2,919,554
1918	.....	2,240,558
1919	1,806,753	2,525,024
1920	2,522,029	3,375,003
1921	2,780,139	4,023,113
1922	2,839,701	4,052,972

Quantity not stated prior to 1919.

Coal-Tar Distillates, Not Elsewhere Specified, and Not Colors or Dyes.

	Pounds.	Dollars.
1914	.....	138,636
1915	.....	31,979
1916	.....	358,836
1917	.....	78,065
1918	.....	7,571
1919	168,235	18,709
1920	3,100	4,436
1921	.....	.....
1922	159,045	22,079

Quantity not stated prior to 1919.

Coal-Tar Preparations, Medicinal.

			Dollars.
1891	.....	.....	137,925
1901	.....	.....	383,559
1917	.....	.....	381,256
1918	.....	.....	314,138
1919	.....	.....	222,322
1920	.....	.....	111,921
1921	.....	.....	235,240
1922	.....	.....	260,878

Cobalt and Cobalt Ore, and Zaffer

	Pounds.	Dollars
1881	.....	.....
1891	2,024	54
1901	.....	.....
1913	310,951	30,713
1914	197,009	115,038
1916	24,095	8,225
1916	144,170	186,124
1917	136,883	191,966
1918	161,695	306,310

Stated separately after 1918.

Cobalt, Ore.

	Pounds.	Dollars.
1919	220,125	55,197
1920	17,035	2,823
1921	13,039	4,794
1922	7,657	3,235

Cobalt, Metal.

	Pounds.	Dollars.
1919	156,372	511,683
1920	99,595	228,891
1921	133,877	322,293
1922	4,252	11,143

Cobalt, Oxide of.

	Pounds.	Dollars.
1871	.....	2,766
1881	21,844	15,837
1891	34,700	63,433
1901	61,962	111,740
1913	28,729	14,405
1914	109,584	95,026
1915	109,155	180,087
1916	238,034	228,745
1917	236,822	220,263
1918	220,793	248,172
1919	143,003	215,441
1920	199,097	282,457
1921	187,177	442,501
1922	160,617	316,393

Coca Leaves

	Pounds.	Dollars.
1901	.....	487
1913	1,175,780	139,035
1914	711,564	91,384
1915	1,048,312	98,870
1916	947,537	100,627
1917	634,932	90,131
1918	1,059,484	179,312
1919	1,023,322	186,477
1920	963,552	211,514
1921	306,308	63,767
1922	33,058	5,170

Cocoa Butter, or Butterine, Refined, Deodorized Cocoanut Oil, and All Substitutes for Cocoa Butter.

	Pounds.	Dollars.
1913	3,634,986	990,568
1914	2,876,967	801,259
1915	126,028	35,863
1916	69,888	15,824
1917	24,280	7,581
1918	14,512	4,569
1919	10,710	3,310
1920	9,439	4,486
1921	441,633	96,172
1922	6,335,006	1,550,062

Cocaine, Ecgonine, and Salts Of

	Ounces.	Dollars.
1901	.....	176,948
1913	3,715	4,835
1914	3,291	4,101
1915	179	422
1916	4,275	5,887
1917	19,388	38,627
1918	8,597	35,358
1919	19,382	68,584
1920	11,614	29,217
1921	6,172	22,521
1922	7,376	16,064

Cocculus Indicus

	Pounds.	Dollars.
1881	1,081	22
1891	1,741	42
1901	9,192	166
1913	.....	.....
1914	4,446	121
1915	9,550	388
1916	.....	.....
1917	7,410	2,818
1918	.....	.....
1919	26,116	10,122
1920	4,325	612
1921	23,632	1,560
1922	.....	.....

Cochineal

	Pounds.	Dollars.
1871	1,869,084	1,184,245
1881	1,072,144	527,836
1891	86,797	19,035
1901	114,414	20,414
1913	109,089	44,249
1914	138,139	52,260
1915	155,430	38,454
1916	772,416	358,914
1917	124,745	46,802
1918	160,547	75,924
1919	177,585	70,229
1920	166,014	72,718
1921	100,844	39,657
1922	191,102	67,011

Cocoanut Meat, or Copra, Not Shredded, Desiccated or Prepared

	Pounds.	Dollars.
1913	34,283,592	1,531,804
1914	44,459,158	2,395,105
1915	88,690,392	3,390,157
1916	108,507,765	4,551,422
1917	247,043,127	12,530,112
1918	486,833,868	26,937,621
1919	300,965,246	19,847,782
1920	218,521,946	15,171,465
1921	102,245,515	9,923,780
1922	255,721,818	9,403,636

Collodion and All Other Liquid Solutions of Pyroxylin

	Pounds.	Dollars.
1922	12,051	4,685

Not stated prior to 1922.

Colombo Root

	Pounds.	Dollars.
1881	8,336	814
1891	.....	.....
1901	43,040	1,466
1913	27,565	794
1914	4,587	134
1915	8,751	458
1916	48,867	3,442
1917	92,349	4,990
1918	20,759	3,061
1919	2,105	548
1920	130,862	16,185
1921	425,190	32,646
1922	.....	.....

Coloring for Brandy, Wine, Beer or Other Liquors

			Dollars.
1901	.....	.....	1,389
1913	.....	.....	1,925
1914	.....	.....	1,628
1915	.....	.....	842
1916	.....	.....	192
1917	.....	.....	225
1918	.....	.....	.....
1919	.....	.....	.....
1920	.....	.....	13
1921	.....	.....	2,040
1922	.....	.....	158

Color Foils

			Dollars.
1913	.....	.....	10,925
1914	.....	.....	7,347
1915	.....	.....	2,516
1916	.....	.....	.....
1917	.....	.....	1,747
1918	.....	.....	5,743
1919	.....	.....	.....
1920	.....	.....	3,385
1921	.....	.....	6,969
1922	.....	.....	3,828

Copperas, or Sulphate of Iron

	Pounds.	Dollars.
1871	1,842,308	9,083
1881	151,496	956
1891	896,937	4,104
1901	24,786	243
1913	6,196	174
1914	1,120	18
1915	4,750	95
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	377,613	4,869
1921	119,947	1,733
1922	240,517	2,022

Copper, Sulphate of, or Blue Vitriol

	Pounds.	Dollars.
1871	45,809	2,339
1881	20	3
1891	8,432	310
1901	1,788	95
1913	11,051	728
1914	114,730	5,486
1915	45,239	2,156
1916	184,182	17,651
1917	15,952	2,233
1918	98,143	9,035
1919	120	36
1920	72,665	7,243
1921	676,628	38,370
1922	529,557	23,412

Cork, Artificial, or Substitutes, Manufactured from Cork Waste or Granulated Cork

	Pounds.	Dollars.
1919	175,331	116,505
1920	.....	.....
1921	6	1
1922	220	41

Not stated prior to 1919.

Cork Bark, Cut Into Squares, Cubes or Quarters

	Pounds.	Dollars.
1919	5,653	2,927
1920	1,353	462
1921	524	145
1922	1,174	105

Not stated prior to 1919.

Imports Into the United States

Cork Stoppers

	Pounds.	Dollars.
1891	.....	428,635
1901	1,286,593	534,064
1914	888,500	728,317
1915	326,887	250,342
1916	269,806	170,746
1917	437,550	275,161
1918	365,877	198,378
1919	119,000	69,657
1920	139,829	120,389
1921	218,932	156,512
1922	136,118	87,696

Cork Disks, Wafers or Washers

	Pounds.	Dollars.
1914	2,065,567	1,675,683
1915	1,926,864	1,165,540
1916	695,776	487,588
1917	2,815,515	1,973,342
1918	2,316,018	1,445,851
1919	706,252	552,857
1920	1,377,958	857,525
1921	995,208	688,193
1922	375,463	247,043

Cork Insulation, in Slabs, Boards, Planks, Etc.

	Pounds.	Dollars.
1917	4,038,372	181,698
1918	3,771,294	181,402
1919	2,834,807	177,389
1920	6,710,418	543,494
1921	9,112,352	779,673
1922	13,353,866	603,165

Not stated prior to 1917.

Cork Paper

		Dollars.
1917	.....	138,214
1918	.....	107,462
1919	.....	105,751
1920	.....	85,349
1921	.....	40,243
1922	.....	23,242

Not stated prior to 1917.

Cork Waste, Shavings and Cork Refuse of All Kinds

	Pounds.	Dollars.
1917	120,677,624	1,743,184
1918	95,051,164	1,582,755
1919	101,762,928	1,827,541
1920	146,649,475	2,813,247
1921	130,669,984	3,161,790
1922	151,425,654	2,051,339

Not stated prior to 1917.

Corkwood, or Cork Bark, Unmanufactured

	Pounds.	Dollars.
1871	.....	359,626
1881	.....	787,033
1891	.....	1,249,008
1901	.....	1,727,921
1913	133,227,878	3,152,070
1914	88,282,529	2,646,018
1915	24,897,803	1,420,581
1916	32,806,700	1,517,366
1917	40,273,005	2,125,633
1918	30,750,497	1,479,072
1919	26,505,971	1,736,100
1920	27,376,326	1,456,276
1921	47,804,241	2,373,006
1922	37,434,747	1,023,587

Cosmetics and Toilet Preparations, Including Tooth Pastes, Powders, Etc.

	Pounds.	Dollars.
1913	.....	1,026,369
1914	.....	1,086,211
1915	.....	1,542,131
1916	.....	1,271,614
1917	.....	1,702,939
1918	.....	1,502,713
1919	817,171	1,549,181
1920	903,275	455,491
1921	399,657	410,854
1922	1,250,502	844,575

Quantity not stated prior to 1919.

Crayons, Including Charcoal Crayons or Fusains

	Pounds.	Dollars.
1871	.....	2,582
1881	.....	10,047
1891	.....	18,028
1901	.....	9,030
1913	.....	12,925
1914	.....	18,359
1915	.....	15,090
1916	.....	11,535
1917	.....	12,945
1918	.....	10,282
1919	14,330	11,376
1920	16,777	11,284
1921	40,673	16,363
1922	97,358	27,525

Quantity not stated prior to 1919.

Cream of Tartar

	Pounds.	Dollars.
1871	3,605,401	639,467
1881	23	7
1891	778	158
1901	145	59
1913	66,718	11,797
1914	812,857	156,987
1915	764,868	166,922
1916	38,588	13,479
1917	98,609	28,488
1918	68,586	16,068
1919	.....	.....
1920	123,017	52,300
1921	578,641	166,048
1922	2,154,842	427,727

Cresol

	Pounds.	Dollars.
1917	4,790,699	329,738
1918	7,531,607	546,300
1919	8,687,183	820,367
1920	8,188,303	635,353
1921	6,476,140	643,754
1922	3,156,623	173,286

Not stated prior to 1917.

Crucibles of Stone and Earthenware

		Dollars.
1914	.....	10,974
1915	.....	6,764
1916	.....	7,641
1917	.....	58,161
1918	.....	7,880
1919	.....	1,432
1920	.....	9,880
1921	.....	8,634
1922	.....	6,951

Not stated prior to 1914.

Cryolite, or Kryolith

	Tons.	Dollars.
1871	.....	71,058
1881	.....	103,529
1891	7,129	95,405
1901	6,167	82,533
1913	2,519	52,440
1914	2,157	47,435
1915	4,569	91,417
1916	3,962	84,497
1917	3,835	163,475
1918	4,383	218,600
1919	19,951	97,500
1920	2,130	106,500
1921	3,866	194,158
1922	3,477	296,888

Cubebs

	Pounds.	Dollars.
1871	64,431	3,686
1881	131,850	21,505
1891	65,404	46,530
1901	310,172	22,248
1913	166,307	53,663
1914	105,665	32,456
1915	87,538	23,451
1916	89,300	28,566
1917	123,558	43,442
1918	76,895	45,034
1919	147,604	57,564
1920	139,158	103,026
1921	127,667	121,595
1922	40,482	23,074

Cudbear

	Pounds.	Dollars.
1871	.....	40,253
1881	1,931,357	232,360
1891	402,241	37,889
1901	44,332	2,964
1913	27,971	1,775
1914	15,653	1,061
1915	24,827	1,680
1916	55,948	6,512
1917	49,163	6,105
1918	62,504	10,166
1919	44,432	6,012
1920	34,004	4,857
1921	46,647	7,874
1922	29,059	4,984

Curry and Curry Powder

	Pounds.	Dollars.
1871	.....	569
1881	.....	3,893
1891	.....	5,102
1901	.....	7,852
1913	.....	12,087
1914	.....	11,807
1915	.....	9,872
1916	.....	8,669
1917	.....	10,624
1918	.....	9,248
1919	11,800	4,606
1920	35,975	13,651
1921	32,403	10,206
1922	20,537	8,465

Quantity not stated prior to 1919.

Cuttlefish Bone

	Pounds.	Dollars.
1901	193,494	23,590
1913	218,317	30,355
1914	309,540	56,051
1915	282,239	52,041
1916	214,659	36,576
1917	230,271	52,838
1918	247,250	57,536
1919	186,633	73,380
1920	360,538	122,047
1921	375,251	86,812
1922	206,028	29,020

Dandelion Root

	Pounds.	Dollars.
1881	33,119	2,966
1891	59,929	3,593
1901	73,573	4,078
1913	108,434	8,269
1914	109,658	9,389
1915	112,814	12,137
1916	29,378	6,487
1917	108,713	23,912
1918	149,088	37,773
1919	77,165	16,600
1920	201,708	28,139
1921	182,907	29,021
1922	114,808	6,989

Decalcomanias, in Ceramic Colors

	Pounds.	Dollars.
1913	80,094	144,890
1914	45,999	92,528
1915	22,411	62,462
1916	11,176	32,882
1917	8,471	27,393
1918	5,195	22,206
1919	2,984	14,304
1920	4,905	19,616
1921	6,301	30,741
1922	2,842	19,362

Decalcomanias, All Other, Except Toys

	Pounds.	Dollars.
1913	41,370	42,001
1914	132,805	131,494
1915	90,040	87,041
1916	51,840	55,634
1917	66,513	60,844
1918	34,858	41,300
1919	55,236	85,068
1920	71,740	78,516
1921	137,825	181,380
1922	138,244	181,071

Diamonds, Glaziers, Engravers and Miners', Unset

	Carats.	Dollars.
1871	.....	976
1881	.....	233,596
1891	.....	407,188
1901	.....	4,071
1913	.....	368,241
1914	.....	101,830
1915	.....	258,272
1916	.....	738,085
1917	.....	948,592
1918	.....	1,049,975
1919	18,793	632,129
1920	42,161	1,270,040
1921	41,058	1,088,441
1922	20,927	458,562

Quantity not stated prior to 1919.

Dimethylaniline

	Pounds.	Dollars.
1921	8,188,532	165,639
1922	23,565	3,828

Not stated prior to 1922.

Divi Divi

	Pounds.	Dollars.
1901	853,573	12,505
1913	314,491	4,143
1914	29,032	465
1915	4,513,219	71,367
1916	16,467,455	310,572
1917	15,969,144	293,191
1918	15,739,331	274,891
1919	26,556,867	522,913
1920	26,632,840	580,972
1922	7,558,995	91,405

Dyewoods, Not Elsewhere Specified

	Tons.	Dollars.
1871	16,598	647,224
1881	4,947	159,900
1891	1,002	28,960
1901	14,985	151,849
1913	155	1,794
1914	371	6,097
1915	1,520	20,674
1916	7,043	172,765
1917	6,745	48,211
1918	16,489	425,942
1919	2,153	52,196
1920	2,339	49,913
1921	2,342	51,082
1922	4,731	118,406

Eggs, Poultry

	Dozens.	Dollars.
1871	.....	569,493
1881	8,569,568	1,087,250
1891	8,219,339	1,186,074
1901	127,685	10,572
1913	1,271,765	191,714
1914	5,823,749	1,059,595
1915	3,058,863	440,067
1916	733,313	110,638
1917	1,103,187	267,822
1918	1,619,259	482,636
1919	846,573	232,491
1920	1,348,383	466,753
1921	3,315,805	1,056,359
1922	1,223,540	327,566

Eggs, Dried

	Pounds.	Dollars.
1913	20,284	7,537
1914	38,061	12,640
1915	30,575	10,385
1916	38,993	9,875
1917	1,590,563	417,417
1918	1,598,630	429,167
1919	741,972	419,799
1920	3,311,350	1,812,648
1921	2,419,997	1,086,318
1922	1,964,725	730,919

Eggs, Frozen or Otherwise, Prepared or Preserved, in Packages

	Pounds.	Dollars.
1914	2,647,974	305,232
1915	2,815,511	198,654
1916	3,756,188	248,997
1917	2,171,338	178,627
1918	1,250,574	153,870
1919	1,210,321	245,494
1920	6,579,489	1,030,364
1921	10,133,235	1,593,782
1922	6,351,612	678,364

Not stated prior to 1914.

Eggs, Yolks of

	Pounds.	Dollars.
1881	.....	2,454
1891	.....	18
1901	.....	195
1913	227,457	37,097
1914	675,058	168,972
1915	1,382,408	257,607
1916	2,919,019	373,152
1917	6,924,071	1,332,095
1918	8,077,730	2,029,420
1919	4,746,015	1,648,564
1920	9,044,186	3,909,927
1921	10,312,080	3,206,752
1922	8,379,098	1,873,490

Enamel, Fusible and Glass

		Dollars.
1913	.....	11,957
1914	.....	18,028
1915	.....	10,975
1916	.....	3,731
1917	.....	12,078
1918	.....	8,052
1919	.....	5,477
1920	.....	27,011
1921	.....	24,995
1922	.....	11,107

Enamel, Glass, White, for Watch and Clock Dials

		Dollars.
1901	.....	5,082
1913	.....	15,855
1914	.....	13,284
1915	.....	7,331
1916	.....	4,930
1917	.....	13,604
1918	.....	10,465
1919	.....	6,585
1920	.....	12,267
1921	.....	5,271
1922	.....	4,765

Enamel Paints

	Pounds.	Dollars.
1913	59,457	11,877
1914	96,174	17,316
1915	86,078	6,504
1916	54,546	8,987
1917	118,571	13,302
1918	2,470	336
1919	1,908	2,641
1920	22,848	11,540
1921	52,009	20,244
1922	57,795	17,249

Ergot

	Pounds.	Dollars.
1871	17,805	6,898
1881	137,618	45,156
1891	88,620	26,932
1901	164,446	80,952
1913	223,793	208,364
1914	185,704	102,640
1915	141,915	92,459
1916	12,015	73,896
1917	165,701	80,647
1918	140,474	81,267
1919	116,813	149,890
1920	125,021	361,558
1921	213,491	690,224
1922	167,315	155,921

Ether, Ethyl Chloride

	Pounds.	Dollars.
1913	11,241	7,903
1914	9,014	10,046
1915	.....	.....
1916	2,780	5,193
1917	8,917	5,207
1918	1,274	2,411
1919	22,495	2,250
1920	877	685
1921	7,009	6,482
1922	13,150	2,757

Ether, Fruit, Containing No Alcohol

	Pounds.	Dollars.
1871	127	213
1881	97	180
1891	981	1,702
1901	2,464	4,709
1914	1,331	1,737
1915	117	1,070
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	22,806	2,574
1920	.....	.....
1921	.....	.....
1922	44	101

Ether, Ethyl Acetate, or Acetic Ether

	Pounds.	Dollars.
1920	400	493
1921	.....	.....
1922	230	284

Not stated prior to 1920.

Ethers, Containing Not More Than 10 Per Cent. Alcohol

	Pounds.	Dollars.
1921	269	796
1922	2,177	1,068

Not stated prior to 1921.

Ethers, Containing More Than 10 Per Cent. Alcohol

	Pounds.	Dollars.
1901	698	1,119
1914	.....	1,868
1915	66	64
1916	140	169
1917	.....	.....
1918	880	182
1919	.....	.....
1920	.....	.....
1921	240	274
1922	1,316	1,319

Quantity not stated prior to 1915.

Ethers, Sulphuric

	Pounds.	Dollars.
1891	8	1
1901	109	30
1913	755	120
1914	915	131
1915	849	189
1916	62	23
1917	.....	.....
1918	8	7
1919	282,576	28,258
1920	100	34
1921	.....	.....
1922	988	384

Extracts, Wood, for Tanning, Not Elsewhere Specified

	Pounds.	Dollars.
1920	2,145,210	122,254
1921	916,197	50,569
1922	49,400	1,023

Not stated prior to 1920.

Extracts for Tanning (Except Wood) Not Elsewhere Specified

	Pounds.	Dollars.
1920	160,754	14,947
1921	485	284
1922	32,670	10,432

Not stated prior to 1920.

Extracts of Vegetable Origin for Dyeing, Not Elsewhere Specified, Not Containing Alcohol

	Pounds.	Dollars.
1918	1,711,396	101,338
1919	1,284,550	162,146
1920	618,334	103,469
1921	355,463	50,405
1922	834,392	56,365

Not stated prior to 1918.

Ferrophosphorus Metal

	Tons.	Dollars.
1913	81	3,689
1914	26	1,136
1915	27	1,213
1916	12	617
1917	85	5,458
1918	10	1,055
1919	*109,141	3,639
1920	61,665	2,207
1921	14,000	780
1922	11,997	732

* Pounds after 1918.

Ferrovanadium Metal

	Pounds.	Dollars.
1920	19,189	39,254
1921	.....	.....
1922	.....	.....

Not stated prior to 1920.

Fertilizers, Not Specially Provided For

	Tons.	Dollars.
1891	14,792	221,467
1901	72,239	640,428
1913	115,257	2,190,816
1914	197,165	4,241,285
1915	100,155	2,208,193
1916	73,252	1,591,517
1917	71,374	1,521,307
1918	63,815	1,772,684
1919	55,775	2,260,253
1920	123,287	4,752,048
1921	113,353	5,434,425
1922	89,667	2,396,817

Fish Sounds

	Pounds.	Dollars.
1916	396,031	96,201
1917	456,738	104,654
1918	331,248	78,499
1919	150,411	38,876
1920	80,781	9,210
1921	131,136	31,051
1922	38,486	11,242

Not stated prior to 1916.

Filter Tubes

		Dollars.
1901	.....	6,053
1913	.....	6,038
1914	.....	7,437
1915	.....	6,639
1916	.....	2,769
1917	.....	7,359
1918	.....	3,135
1919	.....	2,481
1920	.....	3,765
1921	.....	2,832
1922	.....	630

Filter Masse or Filter Stock

	Pounds.	Dollars.
1914	486,476	53,974
1915	349,498	41,880
1916	54,349	8,356
1917	65,052	10,304
1918	48,210	13,917
1919	6,605	1,097
1920	65,750	9,048
1921	146,282	26,455
1922	109,089	11,792

Flavoring Extracts

	Pounds.	Dollars.
1918	4,938	6,383
1919	3,431	11,293
1920	5,057	9,173
1921	43,625	30,693
1922	671,523	409,930

Not stated prior to 1918.

Floral Essences Containing No Alcohol

		Dollars.
1914	.....	87,086
1915	.....	145,973
1916	.....	265,956
1917	.....	408,936
1918	.....	250,531
1919	.....	34,610
1920	.....	174,097
1921	.....	176,108
1922	.....	185,859

Not stated prior to 1914.

Flowers and Leaves in a Crude State, Not Elsewhere Specified

	Pounds.	Dollars.
1920	3,880,591	684,337
1921	2,658,910	401,233
1922	2,153,654	248,913

Not stated prior to 1920.

Imports Into the United States

Floral or Flower Waters Containing No Alcohol

		Dollars.
1913	.....	31,710
1914	.....	50,297
1915	.....	22,216
1916	.....	34,461
1917	.....	39,279
1918	.....	52,253
1919	.....	274,648
1920	.....	23,992
1921	.....	61,407
1922	.....	24,126

Fluorspar

	Tons.	Dollars.
1913	23,786	77,535
1914	13,663	50,943
1915	6,925	27,951
1916	8,808	32,482
1917	12,008	87,380
1918	10,936	117,279
1919	10,367	169,605
1920	11,312	146,151
1921	18,068	219,557
1922	8,661	86,678

Formaldehyde Solution Containing Not More Than 40 Per Cent. Formaldehyde or Formaline

	Pounds.	Dollars.
1914	14,228	1,443
1915	7,700	814
1916	79,857	8,054
1917	23,935	2,349
1918	223,402	40,691
1919	162	71
1920	195,878	92,944
1921	274,000	125,819
1922	45,594	8,246

Fruit Oils and Essences Not Elsewhere Specified

	Pounds.	Dollars.
1920	3,922	12,908
1921	3,080	7,554
1922	2,406	1,496

Not stated prior to 1920.

Fuller's Earth

	Tons.	Dollars.
1911	15,813	125,899
1912	16,175	138,111
1913	16,866	145,588
1914	19,367	174,276

Subdivided after 1914; see below.

Fuller's Earth, Unwrought and Unmanufactured

	Tons.	Dollars.
1871	326	3,383
1881	268	3,207
1891	.....	.....
1901	2,653	16,006
1915	745	5,268
1916	1,067	7,825
1917	975	7,846
1918	1,348	14,552
1919	657	7,800
1920	334	6,413
1921	1,222	16,561
1922	394	5,721

Fuller's Earth, Wrought or Manufactured

	Tons.	Dollars.
1901	7,352	55,450
1915	18,754	163,540
1916	14,973	135,845
1917	15,077	159,071
1918	13,435	177,102
1919	13,036	205,219
1920	14,461	199,284
1921	11,015	145,377
1922	8,537	122,261

Fustic

	Tons.	Dollars.
1881	8,677	130,496
1891	9,100	132,842
1901	7,140	83,695
1913	3,785	53,303
1914	7,121	100,501
1915	12,354	179,959
1916	17,469	289,913
1917	5,195	142,431
1918	16,259	435,428
1919	4,486	83,096
1920	929	16,567
1921	2,504	36,683
1922	4,390	85,912

Galalith (Artificial Ivory) and Manufactures of

		Dollars.
1913	.....	12,736
1914	.....	15,060
1915	.....	10,048
1916	.....	10,028
1917	.....	30,762
1918	.....	45,368
1919	.....	75,883
1920	.....	138,515
1921	.....	58,016
1922	.....	147,448

Gas Liquor, Ammoniacal

		Dollars.
1913	.....	35,245
1914	.....	29,336
1915	.....	31,466
1916	.....	26,733
1917	.....	23,335
1918	.....	5,059
1919	.....	.....
1920	.....	18,672
1921	.....	7,571
1922	.....	35,156

Gelatin, Unmanufactured

	Pounds.	Dollars.
1871	.....	55,095
1891	533,812	251,833
1901	700,770	303,054
1913	1,085,940	279,802
1914	2,439,440	768,215
1915	2,708,362	916,368
1916	1,657,065	319,173
1917	967,929	309,524
1918	369,115	133,873
1919	183,716	99,068
1920	1,112,589	573,889
1921	2,262,392	1,171,256
1922	2,460,908	959,719

Gentian Root

	Pounds.	Dollars.
1881	102,297	3,393
1891	214,645	5,943
1901	574,212	16,758
1913	1,796,928	88,281
1914	2,181,935	109,119
1915	1,022,252	55,553
1916	788,307	63,240
1917	1,780,044	218,377
1918	382,590	46,616
1919	188,402	26,663
1920	913,343	92,524
1921	1,051,380	78,862
1922	206,656	13,062

Ginger Root, Unground, Not Preserved or Candied.

	Pounds.	Dollars.
1901	3,507,680	194,605
1913	7,856,401	406,197
1914	3,006,132	145,792
1915	3,310,391	156,973
1916	5,593,845	391,965
1917	4,307,279	411,965
1918	5,157,531	431,245
1919	2,386,644	212,975
1920	9,068,228	1,205,962
1921	4,649,429	583,362
1922	6,071,760	583,301

Glass Bottles and Bottle Glassware, Blown in a Mold, or Otherwise.

	Pounds.	Dollars.
1919	126,995	32,874
1920	81,665	32,801
1921	183,926	19,065
1922	335,116	34,444

Not stated prior to 1919.

Glass Bottles, Vials and Jars, Plain Green or Colored, Molded or Pressed, and Flint, Lime, or Lead, Empty.

	Pounds.	Dollars.
1913	.....	205,267
1914	.....	214,130
1915	3,561,200	83,688
1916	1,351,813	24,049
1917	850,946	19,231
1918	114,725	5,635
1919	199,869	7,531
1920	485,891	25,503
1921	1,481,864	91,008
1922	1,401,725	67,923

Quantity not stated prior to 1915.

Glass, Cylinder and Crown, Unpolished, Silvered.

	Sq. feet.	Dollars.
1914	56,494	3,998
1915	54,393	2,021
1916	12	1
1917	420	45
1918	8,846	1,159
1919	150	15
1920	5,150	911
1921	7,711	1,843
1922	77,367	10,180

Glass, Cylinder and Crown, Polished, Not Bent or Decorated.

	Sq. feet.	Dollars.
1913	579,129	119,395
1914	615,337	121,814
1915	190,274	36,783
1916	108,578	19,893
1917	.....	.....
1918	255	307
1919	.....	.....
1920	15,176	7,697
1921	131,171	108,770
1922	144,215	59,653

Glass, Cylinder and Crown, Polished When Bent or Decorated.

	Sq. feet.	Dollars.
1913	247,428	60,269
1914	147,482	36,116
1915	43,385	10,076
1916	5,321	1,353
1917	39	67
1918	.....	.....
1919	.....	.....
1920	668	232
1921	2,961	3,426
1922	2,671	508

Glass, Cylinder and Crown, Polished, Silvered, Not Bent or Decorated

	Sq. feet.	Dollars.
1914	90,657	20,405
1915	89,346	19,597
1916	8,798	1,905
1917	.....	.....
1918	15	15
1919	.....	.....
1920	22,091	8,302
1921	111,357	156,064
1922	131,251	63,315

Not stated prior to 1914.

Glass, Cylinder and Crown, Polished, Silvered, Bent or Decorated.

	Sq. feet.	Dollars.
1920	11,506	6,058
1921	28	35
1922	7,174	4,971

Not stated prior to 1920.

Glass Demijohns and Carboys, Covered or Uncovered, Empty.

	Pounds.	Dollars.
1914	.....	3,899
1915	27,990	890
1916	4,731	298
1917	.....	.....
1918	2,528	209
1919	4,905	3,043
1920	250	16
1921	10,858	3,206
1922	24,639	473

Quantity not stated prior to 1915.

Glass, Plate, Fluted, Rolled, Ribbed or Rough, or the Same Containing a Wire Netting Within Itself.

	Sq. feet.	Dollars.
1913	379,219	14,812
1914	436,587	15,207
1915	307,516	12,742
1916	69,272	4,526
1917	18,240	2,002
1918	17,656	2,239
1919	6,978	2,453
1920	19,053	3,940
1921	220,674	19,100
1922	293,718	29,388

Glass, Plate, Fluted, Rolled, Ribbed or Rough, Ground, Smoothed or Otherwise Obscured.

	Sq. feet.	Dollars.
1913	9,617	2,247
1914	614,012	126,917
1915	4,872	1,074
1916	489	124
1917	5,952	402
1918	3,996	391
1919	.....	.....
1920	46,087	34,754
1921	439,004	317,730
1922	298,170	142,171

Glass, Plate—Cast, Polished, Finished or Unfinished, Unsilvered, or the Same Containing a Wire Netting Within Itself.

	Sq. feet.	Dollars.
1913	1,068,427	247,015
1914	2,819,386	631,596
1915	440,718	100,400
1916	12,782	3,778
1917	13,484	13,787
1918	.....	.....
1919	.....	.....
1920	430,253	309,932
1921	3,484,398	3,008,343
1922	4,750,252	2,170,100

Glass Plate—Cast, Polished, Unsilvered When Bent or Decorated, Etc.

	Sq. feet.	Dollars.
1913	88,189	47,449
1914	140,806	62,228
1915	27,121	14,531
1916	7,147	2,726
1917	3,334	1,542
1918	.....	.....
1919	273	210
1920	4,236	2,766
1921	28,396	26,663
1922	115,583	62,217

Glass, Plate—Cast, Polished, Silvered and L. G. Plates, Exceeding in Size 144 Square Inches.

	Sq. feet.	Dollars.
1913	832	527
1914	18,229	4,883
1915	2,592	994
1916	2,557	515
1917	35	116
1918	181	82
1919	26	122
1920	6,939	5,459
1921	49,369	38,767
1922	74,312	38,745

Glass, Plate—Cast, Polished, Silvered When Bent or Otherwise Decorated.

	Sq. feet.	Dollars.
1913	1,510	1,004
1914	19,659	5,854
1915	6,822	2,152
1916	2,570	2,135
1917	14	35
1918	104	94
1919	.....	.....
1920	66	115
1921	45	85
1922	213	508

Glassware, Chemical, Including Flasks, Beakers, Graduated Ware and All Ware Known as Chemical Ware.

		Dollars.
1919	.....	56,999
1920	.....	160,597
1921	.....	156,426
1922	.....	185,383

Not stated prior to 1919.

Window Glass

(Stated in detail for later years.)

	Pounds.	Dollars.
1871	37,922,875	1,495,170
1881	45,612,593	1,471,914
1891	61,577,799	1,512,703
1901	29,967,415	970,073

Glass, Window—Cylinder, Crown, Unpolished.

	Pounds.	Dollars.
1913	20,458,971	804,732
1914	31,197,531	1,212,536
1915	16,532,210	679,228
1916	1,401,572	140,262
1917	2,594,979	277,222
1918	572,614	84,018
1919	360,953	25,616
1920	2,448,115	250,649
1921	29,173,325	1,639,579
1922	50,053,037	2,532,986

Glass, Window—Cylinder, Crown and Common, Unpolished When Bent or Decorated.

	Pounds.	Dollars.
1913	1,773,023	153,723
1914	1,703,186	149,203
1915	460,017	56,223
1916	339,009	52,051
1917	370,522	47,069
1918	131,139	19,010
1919	159,103	29,829
1920	735,168	97,321
1921	1,960,676	121,594
1922	755,814	79,795

Glauber Salts.

	Tons.	Dollars.
1871	118	2,879
1881	.....	15
1891	108	2,167
1901	305	6,826
1913	240	5,685
1914	228	5,557
1915	53	1,113
1916	1	33
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	1	36
1921	44	710
1922	7,102	80,710

Glazes, Fluxes, Enamels and Colors, Ceramic and Glass.

	Pounds.	Dollars.
1914	.....	38,527
1915	.....	70,782
1916	.....	64,138
1917	.....	43,421
1918	.....	26,583
1919	19,046	22,839
1920	45,661	48,090
1921	53,907	60,753
1922	52,627	47,835

Not stated prior to 1914; quantity not stated prior to 1919.

Glucose.

	Pounds.	Dollars.
1871	.....	412
1881	.....	107,379
1891	815,491	22,038
1901	94,767	2,317
1913	212,635	7,166
1914	262,223	9,025
1915	52,799	1,880
1916	1,233	313
1917	7,696	331
1918	105,551	6,482
1919	400	40
1920	40,267	3,040
1921	50	5
1922	3,631	142

Glue.

	Pounds.	Dollars.
1871	1,578,239	128,528
1881	1,888,005	243,353
1891	5,451,136	485,557
1901	4,530,390	567,992
1913	5,099,661	672,266
1914	22,545,681	1,792,612
1915	8,086,283	702,350
1916	3,050,794	219,177
1917	6,301,825	954,673
1918	2,013,312	342,017
1919	487,917	141,294
1920	1,422,594	373,616
1921	3,214,400	686,322
1922	4,148,656	557,555

Glue Size

	Pounds.	Dollars.
1921	3,216	97
1922	3,411	152

Not stated prior to 1921.

Glycerine, Crude.

	Pounds.	Dollars.
1871	213,568	34,498
1881	6,669,531	675,334
1891	11,983,796	874,161
1901	19,393,926	1,603,356
1913	34,399,129	4,247,082
1914	36,230,383	4,473,178
1915	18,661,929	2,185,368
1916	10,875,058	2,209,610
1917	4,078,803	1,260,454
1918	1,925,815	830,145
1919	1,163,952	368,080
1920	15,664,109	1,849,998
1921	11,056,067	1,576,018
1922	2,091,117	287,148

Glycerine, Refined.

	Pounds.	Dollars.
1891	446,044	43,941
1901	1,195,580	128,940
1913	432,339	73,336
1914	551,306	90,562
1915	366,567	60,908
1916	303,463	132,469
1917	137,128	76,361
1918	19,750	17,438
1919	162,916	67,597
1920	1,911,278	414,316
1921	3,960,671	850,834
1922	75,953	16,649

Gold Beaters' Molds and Skins.

	Number.	Dollars.
1871	.....	22,632
1881	.....	23,806
1891	.....	39,625
1901	.....	38,556
1913	.....	26,408
1914	.....	26,634
1915	.....	13,944
1916	.....	28,131
1917	.....	38,651
1918	.....	22,609
1919	77,635	9,235
1920	34,239	21,262
1921	22,003	62,918
1922	12,210	41,581

Quantity not stated prior to 1919.

Gold Leaf.

	100 leaves.	Dollars.
1871	161	3,507
1881	451	10,820
1891	167	3,062
1901	115	2,704
1913	30,902	28,283
1914	37,527	32,482
1915	13,614	12,549
1916	1,547	773
1917	14,370	12,403
1918	8,472	6,334
1919	14	10
1920	5,638	3,792
1921	67,999	64,114
1922	53,735	70,962

"Gold Size or Japan"

See "Varnish, Gold Size or Japan."

Grease Enfleurage, Not Containing Alcohol.

	Pounds.	Dollars.
1891	.....	263,950
1901	137,812	246,869
1913	92,446	124,195
1914	40,638	51,417
1915	28,407	31,578
1916	5,245	8,524
1917	26,636	33,945
1918	23,620	167,861
1919	13,357	196,345
1920	9,720	48,979
1921	19,726	241,958
1922	17,268	228,557

Grease, Marrow, Crude.

	Pounds.	Dollars.
1918	44,366	8,774
1919	232,960	17,738
1920	37,511	4,035
1921	60,090	4,513
1922	25,243	801

Grease, Soluble, Used in Processes of Softening, Dyeing or Finishing.

	Pounds.	Dollars.
1913	.....	4,886
1914	.....	4,401
1915	.....	2,360
1916	.....	584
1917	.....	77
1918	.....	66
1919	4,888	690
1920	17	14
1921	451	59
1922	2,828	225

Quantity not stated prior to 1919.

Grease, Wool, Crude

	Pounds.	Dollars.
1891	7,683,090	191,371
1901	11,627,387	260,646
1913	14,473,551	328,991
1914	12,284,248	292,988
1915	9,281,273	286,705
1916	7,617,713	350,535
1917	4,801,795	294,326
1918	4,481,486	338,877
1919	139,436	17,153
1920	2,366,366	140,909
1921	3,396,285	141,057
1922	6,281,426	149,003

Imports Into the United States

Grease, Wool, Refined

	Pounds.	Dollars.
1913	2,009,018	86,474
1914	2,691,591	121,847
1915	467,761	23,418
1916	214,599	14,794
1917	316,149	24,819
1918	31,218	2,572
1919	1,022	257
1920	44,031	1,504
1921	44,682	3,382
1922	159,528	6,396

Grease and Oils, Sulphur Oil or Olive Foots

	Pounds.	Dollars.
1913	13,698,352	874,114
1914	11,714,795	772,055
1915	12,946,066	885,810
1916	12,684,936	1,055,292
1917	12,138,516	1,108,099
1918	1,712,640	175 814
1919	613,665	116,275
1920	10,409,509	1,603,499
1921	11,010,970	1,260,908
1922	16,034,593	1,080,945

Grease and Oils, All Other (Excepting Fish Oils), Used in Soap Making, Etc.

	Pounds.	Dollars.
1881	253,808	12,809
1891	2,611,262	108,422
1901	5,202,465	228,129
1913	7,334,605	291,934
1914	10,684,016	449,561
1915	17,300,356	709,330
1916	11,324,635	482,479
1917	8,428,089	482,036
1918	26,345,640	2,591,044
1919	27,684,496	2,585,209
1920	29,271,846	3,203,887
1921	20,411,764	1,407,092
1922	18,798,008	910,983

Grease, All Other, Not Specially Provided For

	Pounds.	Dollars.
1871	.....	38,420
1881	4,048,028	175,883
1891	4,563,255	93,874
1901	.....	.....
1913	.....	14,207
1914	.....	106,041
1915	.....	84,764
1916	.....	81,289
1917	.....	23,713
1918	.....	5,367
1919	333,704	40,349
1920	5,006	986
1921	31,867	2,750
1922	120,713	5,429

Quantity not stated prior to 1919.

Guano

	Tons.	Dollars
1871	94,345	3,313,914
1881	23,452	339,552
1891	11,162	194,167
1901	3,122	23,762
1913	16,462	313,891
1914	21,853	754,727
1915	20,950	534,371
1916	15,732	425,210
1917	3,563	73,394
1918	10,663	308,268
1919	8,218	293,425
1920	18,796	1,550,098
1921	37,578	3,158,064
1922	1,305	48,675

Guiacol Carbonate

	Pounds.	Dollars.
1914	1,637	2,645
1915	6,907	11,125
1916	469	1,160
1917	200	6,458
1918	9,492	74,818
1919	2,063	40,407
1920	2,870	18,479
1921	3,465	12,951
1922	3,203	8,249

Not stated prior to 1914.

Gum, Aloes

	Pounds.	Dollars.
1871	204,272	25,710
1881	171,303	24,878
1891	372,764	22,532
1901	841,130	29,048
1913	909,279	77,938
1914	918,402	64,983
1915	953,186	90,081
1916	1,597,811	152,140
1917	1,236,381	97,607
1918	1,230,595	95,846
1919	1,544,940	127,857
1920	1,771,344	178,048
1921	966,423	78,456
1922	955,009	58,454

Gum, Amber and Amberoid, Crude

	Pounds.	Dollars.
1871	.....	180
1881	.....	42,400
1891	13,832	46,691
1901	16,947	119,405
1913	35,646	339,981
1914	22,485	117,375
1915	9,856	108,136
1916	443	3,599
1917	36	324
1918	734	1,280
1919	69	731
1920	3,406	12,036
1921	13,038	42,670
1922	4,164	24,789

Gum, Arabic

	Pounds.	Dollars.
1871	12,317,518	1,700,249
1881	3,484,288	389,420
1891	986,760	124,235
1901	2,315,674	241,661
1912	6,586,737	568,631
1913	7,111,354	593,126
1914	2,727,447	182,370

Included in "Arabic or Senegal" after October 3, 1913.

Gum, Arabic or Senegal

	Pounds.	Dollars.
1914	3,492,682	240,066
1915	5,184,265	402,507
1916	7,617,494	679,928
1917	7,473,234	881,346
1918	6,033,341	1,242,281
1919	7,054,939	1,078,864
1920	6,926,635	881,780
1921	5,788,516	614,656
1922	8,894,748	718,553

Gum, Asafoetida

	Pounds.	Dollars.
1871	90,130	12,789
1881	135,175	12,318
1891	3,424	261
1901	160,998	25,508
1913	134,579	55,868
1914	106,338	27,193
1915	51,727	12,656
1916	115,856	30,126
1917	107,486	52,877
1918	57,398	44,741
1919	48,119	71,261
1920	96,380	211,734
1921	162,668	271,807
1922	5,548	1,463

Gum, Benzoin, Gamboge and Mastic

	Pounds.	Dollars.
1901	23,207	6,418
1913	105,967	41,981
1914	41,975	17,386
1915	106,506	42,940
1916	219,266	73,843
1917	170,950	68,305
1918	136,120	70,501

Mastic shown separately after 1917; Benzoin and Gamboge after 1918.

Gum, Benzoin

	Pounds.	Dollars.
1871	1,631	544
*1881	.....	.....
1891	42,144	16,712
1919	13,265	7,630
1920	18,948	8,068
*1921	34,055	6,392
1922	15,323	7,032

* See Copal, Kauri and Dammar.

Gum, Camphor, Crude, Natural

	Pounds.	Dollars.
1871	624,258	92,345
1881	2,055,165	350,503
1891	1,666,074	408,025
1901	2,175,874	738,929
1913	3,477,760	979,355
1914	3,476,908	929,725
1915	3,715,387	998,555
1916	4,674,530	1,268,233
1917	6,605,630	1,991,408
1918	3,638,384	1,451,050
1919	2,622,792	1,189,768
1920	3,961,252	5,496,098
1921	2,045,273	1,847,572
1922	1,667,278	1,057,243

Gum, Camphor, Refined

	Pounds.	Dollars.
1871	1,974	559
1881	134	36
1891	63	21
1901	77,313	39,507
1913	463,410	153,020
1914	624,508	201,999
1915	1,140,783	408,587
1916	2,304,197	754,498
1917	4,533,918	2,063,177
1918	1,145,244	800,318
1919	1,497,159	1,889,482
1920	1,367,263	2,843,755
1921	801,529	1,150,006
1922	1,596,757	1,195,809

Gum, Camphor, Synthetic

	Pounds.	Dollars.
1915	16	3
1916	.....	.....
1917	460	174
1918	.....	.....
1919	.....	.....
1920	116,100	229,238
1921	123,686	23,090
1922	.....	.....

Not stated prior to 1915.

Gum, Chicle

	Pounds.	Dollars.
1911	5,368,566	2,551,344
1912	5,366,285	2,433,924
1913	6,920,416	3,059,116
*1914	7,998,187	2,902,454

* Under provisions of law of 1909; imported between July 1 and October 3, 1913; stated separately after 1914.

Gum, Chicle, Crude

	Pounds.	Dollars.
1901	1,756,057	380,410
1914	1,080,665	389,717
1915	2,465,400	839,312
1916	2,728,159	915,817
1917	4,435,149	1,467,917
1918	4,580,501	2,076,143
1919	6,583,276	3,669,679
1920	6,950,169	4,838,836
1921	6,808,317	4,391,872
1922	7,015,797	3,836,141

Gum, Chicle, Refined

	Pounds.	Dollars.
1914	472,766	214,257
1915	1,934,760	962,889
1916	2,302,186	1,283,869
1917	3,935,093	2,371,834
1918	2,028,367	1,473,992
1919	529,106	564,270
1920	448,219	550,828
1921	162,895	249,973
1922	4,464	6,803

Gum, Copal, Kauri and Dammar

	Pounds.	Dollars.
1871	1,466,750	186,993
†1881	15,140,656	2,343,736
1891	15,245,524	1,637,677
1901	18,325,248	1,944,056
1912	24,824,399	2,017,737
1913	31,513,330	2,828,840
*1914	9,207,797	989,808
1921	.....	.....

* Under provisions of law of 1909; imported between July 1 and October 3, 1913; stated separately after 1914.

† 1881 includes Benzoin, Gamboge, Mastic and Shellac.

Gum, Copal

	Pounds.	Dollars.
1914	13,005,925	938,002
1915	12,528,887	813,985
1916	24,100,156	1,440,238
1917	25,621,685	1,583,070
1918	16,590,609	1,147,004
1919	18,921,007	4,001,022
1920	26,417,439	2,614,072
1921	32,188,183	4,145,167
1922	15,090,828	1,124,758

Gum, Dammar

	Pounds.	Dollars.
1914	3,854,698	337,245
1915	5,388,644	563,656
1916	10,819,590	790,776
1917	9,200,064	797,115
1918	5,942,538	689,308
1919	4,270,900	528,458
1920	9,637,933	1,548,604
1921	5,710,548	1,249,864
1922	5,478,880	620,599

Gum, Dextrine, Etc.

	Pounds.	Dollars.
1871	.....	10,072
1881	849,892	49,982
1891	6,228,352	212,968
1901	5,602,395	164,120
1913	5,096,891	180,296
1914	6,684,556	213,301

Stated separately after 1914.

Gum, Dextrine, Made from Potato Starch or Potato Flour

	Pounds.	Dollars.
1914	5,226,421	162,688
1915	4,595,949	154,337
1916	720,106	40,577
1917	210,948	17,884
1918	99,228	9,116
1919	421,971	39,533
1920	681,224	59,337
1921	566,670	35,824
1922	1,367,844	80,858

Gum, Dextrine, Dextrine Substitutes, Burnt Starch or British Gum

	Pounds.	Dollars.
1914	471,491	18,180
1915	274,668	12,028
1916	154,882	10,049
1917	32,773	2,855
1918	565	50
1919	.....	.....
1920	77,238	6,764
1921	238,767	13,954
1922	302,022	15,932

Gum, Dragon's Blood

	Pounds.	Dollars.
1871	.....	1,371
1881	.....	2,977
1891	2,088	541
1901	22,678	9,180
1913	14,553	5,916
1914	26,283	9,407
1915	23,110	8,446
1916	20,218	10,602
1917	48,026	19,137
1918	10,387	6,193
1919	24,064	10,121
1920	20,827	16,274
1921	90,508	11,726
1922	9,477	4,334

Gum, Fir or Canada

	Pounds.	Dollars.
1871	.....	3,227
1881	.....	.....
1891	34,318	6,858

Not stated after 1891.

Gum, Gambier, or Terra Japonica

	Pounds.	Dollars.
1871	11,165,119	252,593
1881	38,629,547	1,088,394
1891	27,610,924	1,343,604
1901	26,811,197	824,444
1913	17,037,805	784,931
1914	16,449,663	625,855
1915	14,169,250	542,200
1916	12,602,251	888,985
1917	10,861,904	853,675
1918	8,956,082	953,000
1919	5,909,382	654,211
1920	10,207,013	852,663
1921	6,292,780	432,258
1922	9,817,593	391,482

Gum, Gamboge

	Pounds.	Dollars.
1919	18,153	23,452
1920	470,739	117,560
1921	3,025	3,798
1922	4,904	4,895

Not stated separately prior to 1919.

Gum, Kauri

	Pounds.	Dollars.
1914	6,554,887	1,097,989
1915	9,530,267	1,444,315
1916	9,958,953	1,394,527
1917	6,667,474	1,018,582
1918	5,897,216	1,029,036
1919	4,703,810	713,001
1920	8,424,661	1,152,075
1921	6,718,182	1,197,262
1922	6,623,811	1,221,442

Gum, Lac, Crude, Seed, Button and Stick

	Pounds.	Dollars.
1871	73,758	10,647
1881	194,709	52,740
1891	795,757	127,347
1901	57,992	7,382
1913	293,010	36,832
1914	992,425	143,222
1915	1,126,167	88,293
1916	3,485,975	291,176
1917	5,473,174	637,846
1918	1,715,791	312,584
1919	853,784	183,229
1920	2,424,936	728,417
1921	1,806,726	646,407
1922	1,805,298	241,536

Gum, Mastic

	Pounds.	Dollars.
1918	63,545	9,075
1919	10,281	4,232
1920	20,796	12,399
1921	10,554	5,391
1922	42,895	16,266

Not stated separately prior to 1918.

Gum, Rosin, Crude

	Pounds.	Dollars.
1913	299,983	12,605
1914	2,742,983	58,684
1915	1,503,790	42,085
1916	5,571,325	146,250
1917	129,848	3,380
1918	54,334	2,840
1919	251,853	11,064
1920	141,935	7,223
1921	1,903	126
1922	29,943	1,166

Gum, Senegal

	Pounds.	Dollars.
1901	1,107,763	130,959
1913	172,528	16,254
*1914	140,097	10,609

*Included in "Arabic or Senegal" after October 3, 1913.

Gum, Shellac

	Pounds.	Dollars.
1871	423,537	70,757
*1881	.....	.....
1891	6,290,225	1,078,584
1901	9,617,593	1,278,297
1913	22,069,610	3,046,750
1914	16,824,130	2,680,480
1915	24,308,145	3,018,296
1916	25,927,553	3,301,378
1917	32,847,434	7,709,228
1918	22,841,360	9,514,651
1919	14,268,653	6,462,754
1920	34,151,209	22,178,484
1921	23,871,866	16,634,073
1922	30,767,666	15,656,900

*See Copal, Kauri and Damar.

Gum, Spruce, Crude and Refined

	Pounds.	Dollars.
1918	274	294
1919	509	438
1920	789	752
1921	1,397	2,519
1922	2,664	4,039

Not stated prior to 1918.

Gum, Tragacanth

	Pounds.	Dollars.
1881	315,918	127,312
1891	717,404	211,183
1901	1,071,367	365,737
1913	1,401,721	463,800
1914	1,301,545	460,364
1915	1,025,081	355,119
1916	1,129,704	590,123
1917	473,556	320,751
1918	525,445	279,284
1919	785,725	909,652
1920	1,519,386	1,788,079
1921	324,619	484,605
1922	695,817	398,786

Gum, Tragasol

	Pounds.	Dollars.
1913	1,028,804	23,998
1914	913,077	20,310
1915	761,390	16,295
1916	931,503	21,587
1917	882,914	21,663
1918	503,045	22,247
1919	662,762	40,066
1920	567,550	27,406
1921	660,184	21,766
1922	734,295	26,720

Gums and Gum Resins, in a Crude State, Not Elsewhere Shown

	Pounds.	Dollars.
1881	.....	244,577
1891	.....	1,621,530
1901	.....	87,537
1913	2,704,615	216,886
1914	3,733,839	239,824
1915	4,088,233	255,469
1916	4,963,037	258,837
1917	3,126,764	248,700
1918	5,273,222	625,960
1919	3,232,094	630,683
1920	6,866,439	1,093,332
1921	6,183,215	670,635
1922	7,505,216	532,226

Hemlock Bark, Extract for Tanning, Not Containing Alcohol

	Pounds.	Dollars.
1871	.....	3,256
1881	.....	4,021
1891	768,710	14,958
*1901	3,424,390	101,840
1915	5,263,296	173,998
1916	5,577,989	390,287
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	117,113	4,712
1922	329,569	12,194

*1901 includes "Quebracho extract."

Hide Cuttings, Raw, and Other Glue Stock

	Pounds.	Dollars.
1871	.....	123,664
1881	.....	227,131
1891	.....	353,948
1901	.....	1,055,788
1913	.....	1,773,786
1914	.....	2,126,632
1915	.....	1,504,325
1916	.....	970,313
1917	33,631,932	1,451,319
1918	21,415,345	927,923
1919	8,833,386	518,266
1920	26,248,159	1,666,252
1921	36,120,019	2,270,932
1922	25,222,414	1,149,883

Quantity not stated prior to 1917.

Honey

	Gallons.	Dollars.
1871	85,358	53,120
1881	51,158	29,542
1891	21,392	9,570
1901	129,136	58,688
1913	113,792	64,718
1914	49,163	30,291
1915	268,912	107,172
1916	124,268	55,592
1917	277,345	171,616
1918	159,339	213,006
1919	99,657	151,102
1920	764,244	1,019,250
1921	388,262	469,037
1922	187,441	107,740

Hoofs, Horns, and Parts of, Unmanufactured

	Pounds.	Dollars.
1871	.....	15,264
1881	.....	398,211
1891	.....	587,643
1901	.....	311,924
1913	.....	320,192
1914	.....	254,872
1915	.....	156,126
1916	.....	110,169
1917	.....	171,718
1918	.....	357,399
1919	1,928,384	106,179
1920	4,894,749	292,353
1921	9,424,775	412,931
1922	2,158,131	140,782

Quantity not stated prior to 1919.

Hop Extract and Lupulin

		Dollars.
1901	.....	2,893
1913	.....	34,338
1914	.....	49,451
1915	.....	24,407
1916	.....	3,805
1917	.....	1,759
1918	.....	174
1919	.....	19
1920	.....	20,503
1921	.....	17,690
1922	.....	6,892

Hops

	Pounds.	Dollars.
1871	100,884	12,811
1881	475,428	111,903
1891	3,789,264	1,706,824
1901	2,480,069	827,943
1913	8,471,776	2,843,299
1914	5,360,748	2,775,882
1915	11,710,534	2,738,644
1916	664,284	147,638
1917	212,029	54,701
1918	112,811	61,201
1919	6	14
1920	1,866,641	1,078,558
1921	3,714,536	2,073,574
1922	822,291	343,658

Ichthyol

	Pounds	Dollars.
1901	23,619	33,421
1913	44,347	61,796
1914	66,957	92,485
1915	51,847	70,664
1916	69,227	59,470
1917	91,884	60,757
1918	65,982	43,547
1919	19,623	9,830
1920	98,870	91,927
1921	54,309	31,616
1922	107,119	140,314

Incense

		Dollars.
1901	.....	702
1913	.....	14,637
1914	.....	24,382
1915	.....	4,328
1916	.....	5,431
1917	.....	9,968
1918	.....	12,951
1919	.....	32,446
1920	.....	84,877
1921	.....	102,850
1922	.....	62,040

Imports Into the United States

India Rubber and Substitutes for, Crude—Balata

	Pounds.	Dollars.
1901	7,635	1,987
1913	1,318,598	766,772
1914	1,525,351	789,261
1915	2,473,228	963,384
1916	2,549,303	997,827
1917	3,284,533	1,647,906
1918	2,468,403	1,285,869
1919	1,238,852	593,633
1920	2,013,737	1,278,551
1920	1,979,990	1,043,567
1922	1,807,477	1,063,056

India Rubber and Substitutes for, Crude—Guayule Gum

	Pounds.	Dollars.
1913	10,504,945	4,354,499
1914	1,475,804	607,076
1915	5,116,165	1,442,464
1916	2,826,960	881,023
1917	2,872,372	764,484
1918	3,242,340	1,037,030
1919	2,990,253	761,089
1920	1,314,913	278,175
1920	995,123	197,058
1922	285,200	57,040

India Rubber and Substitutes for, Crude—Gutta-Joolatong, or Pontianak

	Pounds.	Dollars.
1901	9,435,740	257,322
1913	45,444,282	2,197,948
1914	24,224,955	1,175,335
1915	14,765,765	704,613
1916	28,381,105	1,347,176
1917	23,738,004	1,058,577
1918	16,109,009	969,144
1919	11,393,283	1,199,216
1920	18,402,162	2,432,882
1921	6,774,189	1,075,771
1922	5,782,265	453,245

Indigo, Carmined

	Pounds.	Dollars.
1881	.....	329
1891	28,175	33,145
1901	11,061	9,789
1912	9,047	5,903
1913	16,329	9,986
1914	2,130	1,333

Not stated after October 3, 1913.

Indigo, Crude, Natural or Synthetic

	Pounds.	Dollars.
1913	7,712,488	1,102,893
1914	8,252,528	1,115,128
1915	7,983,112	1,604,767
1916	6,794,518	8,451,501
1917	*545,105	960,088

* Figures cover period July 1 to September 8, 1916; stated separately afterward.

Indigo, Natural

	Pounds.	Dollars.
1871	2,101,867	2,115,914
1881	1,099,754	1,541,664
1891	3,999,644	1,692,299
1901	3,139,063	1,402,894
1917	1,231,986	2,449,361
1918	2,141,382	3,261,978
1919	794,251	961,610
1920	154,843	206,119
1921	61,967	121,820
1922	36,007	76,176

Indigo, Synthetic

	Pounds.	Dollars.
1917	886,700	559,156
1918	942,946	553,246
1919	358,867	197,176
1920	520,347	351,440
1921	99,809	107,084
1922	101,683	157,925

Indigo, Dyes Obtained From

		Dollars.
1914	.....	34,342
1915	.....	76,258
1916	.....	155,254
1917	.....	147,744

Stated as "Indigoids, etc," after 1917.

Indigo, Extracts or Pastes

	Pounds.	Dollars.
1871	.....	40,423
1881	1,540,185	141,163
1891	881,969	58,289
1901	181,168	12,292
1912	223,687	45,984
1913	242,998	43,417
1914	11,998	2,540

Not stated after October 3, 1913.

Indigoids Obtained from Indigo or Otherwise

	Pounds.	Dollars.
1918	13,037	40,984
1919	4,236	9,378
1920	70,461	177,736
1921	67,269	110,596
1922	187,156	228,822

Stated as "Indigo Dyes, etc.," prior to 1918.

Ink, Printers'

		Dollars.
1901	.....	13,392
1913	.....	17,820
1914	.....	24,999
1915	.....	15,022
1916	.....	17,884
1917	.....	19,026
1918	.....	4,685
1919	.....	655
1920	.....	7,214
1921	.....	12,319
1922	.....	4,997

Ink, Writing and Copying

		Dollars.
1913	.....	28,518
1914	.....	18,041
1915	.....	22,765
1916	.....	21,931
1917	.....	26,400
1918	.....	11,962
1919	.....	15,615
1920	.....	14,846
1921	.....	10,584
1922	.....	7,424

Ink, All Other, Including Ink Powders

		Dollars.
1871	.....	85,823
1881	.....	151,358
1891	.....	116,354
1901	.....	61,653
1913	.....	4,918
1914	.....	6,931
1915	.....	6,196
1916	.....	3,481
1917	.....	5,095
1918	.....	8,529
1919	.....	7,129
1920	.....	8,460
1921	.....	14,875
1922	.....	7,226

Iodine, Crude

	Pounds.	Dollars.
1871	74,320	212,195
1881	102,863	336,998
1891	241,186	382,009
1901	262,052	658,492
1913	351,256	739,734
1914	230,391	533,447
1915	631,510	1,284,395
1916	1,044,525	2,447,764
1917	1,726,903	4,381,317
1918	253,231	536,799
1919	1,212,290	2,443,569
1920	520,443	927,269
1921	592,758	1,291,669
1922	384,141	988,953

Iodine, Resublimed

	Pounds.	Dollars.
1871	956	3,499
1881	13	30
1891	35	106
1901	22	21
1913	40	96
1914	57	205
1915	3	7
1916	.....	.....
1917	2,610	9,088
1918	15,450	41,739
1919	6,525	22,657
1920	2,870	10,160
1921	2,300	8,051
1922	1,500	4,730

Iodoform

	Pounds.	Dollars.
1901	21	33
1913	16	57
1914	864	301
1915	10	40
1916	.....	.....
1917	.....	.....
1918	1	4
1919	.....	.....
1920	.....	.....
1921	7	27
1922	.....	.....

Ipecac

	Pounds.	Dollars.
1871	22,460	25,232
1881	39,385	41,372
1891	30,484	50,505
1901	52,143	112,465
1913	54,648	86,113
1914	78,654	110,316
1915	137,927	248,408
1916	203,734	484,828
1917	84,672	146,505
1918	60,972	122,281
1919	171,944	378,542
1920	94,429	211,631
1921	83,316	186,998
1922	40,854	44,377

Iridium

	Ounces, troy.	Dollars.
1881	.....	1,730
1891	.....	333
1901	.....	6,072
1913	5,341	348,333
1914	2,185	154,842
1915	3,801	220,823
1916	2,496	146,055
1917	3,899	355,206
1918	2,815	307,954
1919	3,678	503,047
1920	4,969	846,462
1921	3,282	641,349
1922	789	74,188

Iron, Chromate of, or Chromic Ore

	Tons.	Dollars.
1891	4,093	56,982
1901	12,390	214,762
1913	49,772	503,664
1914	85,892	777,166
1915	159,421	772,220
1916	107,089	1,196,250
1917	113,385	1,648,728
1918	77,863	1,555,861
1919	71,592	2,439,830
1920	103,625	1,418,570
1921	152,784	1,689,202
1922	54,820	413,208

Iron in Pigs—Ferrosilicon

	Tons.	Dollars.
1919	6,091	521,142
1920	17,855	891,108
1921	7,361	397,991
1922	10,977	524,355

Iron in Pigs—Ferromanganese

	Tons.	Dollars.
1919	24,006	4,120,794
1920	38,973	3,980,743
1921	43,198	6,057,802
1922	31,164	1,877,094

Iron in Pigs—Kentledge

	Tons.	Dollars.
1919	20	326
1920	.....	.....
1921	.....	.....
1922	.....	.....

Iron in Pigs—Spiegeleisen

	Tons.	Dollars.
1919	27	1,018
1920	3,312	175,969
1921	2,127	109,140
1922	2,204	75,412

Iron in Pigs—All Other

	Tons.	Dollars.
1919	9,989	296,644
1920	122,952	3,731,990
1921	49,630	2,094,834
1922	38,268	788,677

Isinglass and Prepared Fish Sounds

	Pounds.	Dollars.
1871	.....	6,449
1881	393,801	243,239
1891	18,222	17,976
1901	5,608	12,341
1913	225,165	72,540
1914	146,364	56,433
1915	11,906	9,008
1916	13,750	14,498
1917	35,723	35,476
1918	31,490	23,339
1919	16,764	11,806
1920	26,844	29,341
1921	20,972	15,515
1922	15,278	12,416

Jalap

	Pounds.	Dollars.
1871	46,135	29,688
1881	76,986	12,256
1891	92,107	24,141
1901	165,850	15,593
1913	227,275	44,632
1914	208,901	23,942
1915	176,047	18,485
1916	201,383	13,642
1917	168,639	14,315
1918	126,511	34,238
1919	95,103	40,667
1920	193,813	104,902
1921	62,148	22,290
1922	60,474	7,207

Joss Sticks, or Joss Light

		Dollars.
1891	.....	1,307
1901	.....	9,706
1913	.....	13,851
1914	.....	6,888
1915	.....	21,720
1916	.....	36,968
1917	.....	36,115
1918	.....	30,600
1919	.....	26,996
1920	.....	36,137
1921	.....	25,056
1922	.....	46,986

Kelp

		Dollars.
1901	.....	13
1913	.....	4
1914	.....	350
1915	.....	.....
1916	.....	67
1917	.....	50
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	36
1922	.....	.....

Kainite

	Tons.	Dollars.
1891	85,877	605,309
1901	187,470	1,235,124
1913	366,184	2,149,689
1914	526,112	2,579,619
1915	79,124	444,996
1916	64	1,795
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	272,048	5,599,980
1921	204,834	4,782,974
1922	83,571	585,338

Lac, Dye

	Pounds.	Dollars.
1871	128,938	21,069
1881	194,623	39,064
1891	.....	.....
1901	4,922	671
1913	.....	.....
1914	.....	.....
1915	.....	.....
1916	89,600	13,804
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	398,028	54,849
1921	680	135
1922	.....	.....

Lactarene, or Casein

	Pounds.	Dollars.
1913	8,803,639	651,062
1914	10,799,351	705,305
1915	7,919,742	498,897
1916	10,376,641	984,899
1917	12,319,111	1,843,492
1918	12,106,855	1,765,653
1919	8,125,135	959,995
1920	24,039,313	2,783,548
1921	14,179,764	1,570,069
1922	10,529,295	706,861

Lakes, Dry or in Pulp, Not Specially Provided For

	Pounds.	Dollars.
1914	.....	59,603
1915	.....	153,430
1916	.....	29,839
1917	.....	11,230
1918	.....	8,301
1919	600	1,307
1920	8,901	7,870
1921	9,798	6,533
1922	169,895	9,234

Not stated prior to 1914; quantity not stated prior to 1919.

Lanolin

	Pounds.	Dollars.
1913	.....	.....
1914	91,477	9,622
1915	89,583	10,448
1916	13,342	6,353
1917	710	267
1918	4,268	1,083
1919	13	4
1920	439	40
1921	2,898	650
1922	14,870	975

Lard

	Pounds.	Dollars.
1871	9,565	1,478
1881	1,655	225
1891	1,795	187
1901	3,084	290
1913	4,117	496
1914	1,251	169

Included in next class after October 3, 1913.

Lard, Lard Compounds and Lard Substitutes

	Pounds.	Dollars.
1914	124,385	13,665
1915	729,792	79,632
1916	2,405	289
1917	66,682	7,522
1918	1,131,998	266,806
1919	3,191,726	870,361
1920	746,073	192,918
1921	4,988	1,146
1922	3,263	497

Lead, Acetate of—Brown, Gray or Yellow

	Pounds.	Dollars.
1871	1,827	196
1891	.....	.....
1901	11	4
1913	42	8
1914	17,477	957
1915	.....	.....
1916	124	17
1917	225	97
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	3,854	306
1922	5,123	346

Lead, Acetate, White

	Pounds.	Dollars.
1881	34	5
1891	13,279	707
1901	1,500	99
1913	21,599	1,177
1914	110,936	10,768
1915	31,096	1,809
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	220	212
1920	14	7
1921	6,361	549
1922	83,712	6,378

Lead, Nitrate

	Pounds.	Dollars.
1871	513,280	35,358
1881	179,261	10,651
1891	639	46
1901	24,260	1,231
1913	11,305	605
1914	11,312	712
1915	.....	.....
1916	2,205	280
1917	224	22
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	7,746	530

Lead Compounds, Not Elsewhere Specified

	Pounds.	Dollars.
1914	102,899	9,348
1915	86,514	7,471
1916	39,823	3,644
1917	32,887	3,069
1918	4,510	242
1919	2,408	321
1920	5,591	958
1921	13,224	2,102
1922	3,481	683

Lead Pigments, N. E. S.

	Pounds.	Dollars.
1921	35,227	2,869
1922	1,489	407

Not stated prior to 1921.

Lead, Pigs and Bars, Old Refuse Run Into Bars, Etc.

	Pounds.	Dollars.
1871	91,496,716	3,721,096
1881	4,322,068	159,129
1891	19,772,642	615,716
1901	.....	.....
1913	6,905,760	147,838
1914	1,309,204	36,307
1915	951,999	31,385
1916	1,704,889	90,815
1917	6,369,189	323,951
1918	345,861	16,155
1919	2,313,652	103,837
1920	15,242,621	735,608
1921	112,785,058	5,145,452
1922	13,085,648	386,894

Leeches

		Dollars.
1891	.....	3,647
1901	.....	2,464
1913	.....	5,387
1914	.....	7,376
1915	.....	1,834
1916	.....	2,810
1917	.....	16,899
1918	.....	9,035
1919	.....	5,818
1920	.....	14,130
1921	.....	11,100
1922	.....	7,692

Lemon, Lime and Sour Orange Juice

	Pounds.	Dollars.
1871	.....	7,058
1881	.....	63,920
1891	.....	140,673
1901	.....	122,469
1913	.....	116,370
1914	.....	110,860
1915	.....	139,605
1916	.....	152,575
1917	.....	180,088
1918	.....	114,404
1919	1,933,465	277,031
1920	3,254,633	515,004
1921	1,009,329	165,827
1922	1,083,583	169,216

Quantity not stated prior to 1919.

Licorice, Extract of, in Paste, Rolls or Other Forms

	Pounds.	Dollars.
1871	2,665,536	310,901
1881	872,900	111,072
1891	1,190,524	150,090
1901	878,634	96,404
1913	832,277	106,288
1914	946,016	122,210
1915	1,080,718	152,756
1916	1,702,927	230,129
1917	1,156,300	253,671
1918	734,976	229,812
1919	413,648	213,028
1920	1,116,621	773,970
1921	1,653,809	519,884
1922	1,444,253	333,434

Licorice Root

	Pounds.	Dollars.
1871	3,199,958	80,366
1881	29,927,501	575,720
1891	55,093,585	897,186
1901	96,118,444	1,737,709
1913	105,032,429	1,806,756
1914	86,754,245	1,526,057
1915	82,289,410	1,557,442
1916	52,784,042	1,792,573
1917	59,398,644	2,189,441
1918	27,051,021	1,883,886
1919	42,644,661	3,426,007
1920	47,582,849	2,983,716
1921	59,963,895	3,755,726
1922	52,437,947	2,157,916

Madder, or Munjeet, Extract of

	Pounds.	Dollars.
1921	2,300	1,340
1922	.....	.....

Not stated prior to 1921.

Magnesia, Calcined.

	Pounds.	Dollars.
1871	24,874	7,881
1881	20,815	6,182
1891	7,157	1,658
1901	22,383	4,099
1913	72,579	12,592
1914	109,396	15,118
1915	145,806	16,012
1916	46,008	7,560
1917	56,656	17,576
1918	12,165	4,483
1919	572	1,318
1920	38,391	15,063
1921	17,664	6,969
1922	60,998	19,474

Magnesia, Carbonate of, Precipitated.

	Pounds.	Dollars.
1871	132,619	15,031
1881	350,140	35,232
1891	76,015	5,603
1901	13,897	894
1913	77,190	3,811
1914	58,083	3,972
1915	49,731	2,554
1916	19,888	1,414
1917	25,092	5,077
1918	5,681	1,906
1919	232	131
1920	19,112	2,311
1921	3,760	666
1922	26,888	2,998

Imports Into the United States

Magnesia, Chloride of.

	Pounds.	Dollars.
1919	18,676	1,907
1920	214,107	3,371
1921	2,022,339	25,535
1922	9,011,216	102,464

Not stated prior to 1919.

Magnesia, Sulphate of, or Epsom Salts.

	Pounds.	Dollars.
1871	85,582	1,108
1881	17,410	293
1891	16,370	207
1901	266,290	1,682
1913	9,345,099	35,739
1914	13,550,599	48,742
1915	7,005,598	32,862
1916	1,456,254	8,503
1917	54,200	875
1918	48,540	915
1919	4,350	167
1920	662,896	8,925
1921	6,591,977	105,776
1922	16,180,525	119,951

Magnesite, Crude.

	Pounds.	Dollars.
1901	65,996,858	281,901
1913	33,654,260	111,276
1914	21,590,605	46,611
1915	37,463,509	80,625
1916	101,591,459	281,951
1917	179,292,638	748,951
1918	18,552,767	104,947
1919	1,975	57,434
1920	13,881	232,708
1921	50,927	450,872
1922	60,372	907,827

Quantity stated in tons after 1918.

Magnesite, Calcined.

	Pounds.	Dollars.
1913	345,322,155	1,731,443
1914	288,989,577	1,485,273
1915	125,893,407	751,766
1916	32,372,610	282,768
1917	9,448,817	182,037
1918	22,764,029	535,202
1919	12,058	532,020
1920	13,619	365,623
1921	9,425	336,539
1922	16,340	442,259

Quantity stated in tons after 1918.

Magnesium, Metal

	Pounds.	Dollars.
1920	17,988	19,492
1921	43,297	34,123
1922	70,186	32,890

Not stated prior to 1920.

Malt Extract, Fluid, in Bottles or Jugs.

	Gallons.	Dollars.
1881	.....	1,036
1891	46,966	48,802
1901	1,757	1,908
1913	1,405	2,376
1914	1,284	2,087
1915	318	589
1916	64	92
1917	516	485
1918	.....	.....
1919	3	5
1920	.....	.....
1921	3,766	4,116
1922	2,079	3,340

Malt Extract, Fluid, in Casks.

	Gallons.	Dollars.
1891	13,727	6,817
1901	8,244	4,382
1913	9,191	9,661
1914	10,333	10,050
1915	4,124	3,951
1916	2,488	2,313
1917	10,783	10,606
1918	.....	.....
1919	.....	.....
1920	20	51
1921	1,878	3,018
1922	70	113

Malt Extract, Solid or Condensed.

	Pounds.	Dollars.
1891	.....	187
1901	.....	400
1913	.....	338
1914	.....	767
1915	.....	7,006
1916	.....	11,834
1917	.....	71
1918	.....	44
1919	.....	.....
1920	.....	.....
1921	1,563	364
1922	.....	.....

Quantity not stated prior to 1921.

Manganese, Oxide and Ore of.

	Tons.	Dollars.
1871	.....	12,321
1881	642	20,432
1891	48,559	628,672
1901	134,582	1,163,971
1913	407,160	2,195,565
1914	288,837	1,841,472
1915	206,913	1,494,965
1916	492,967	5,338,087
1917	656,026	10,542,572
1918	557,711	11,944,515
1919	373,202	16,358,741
1920	323,901	8,086,001
1921	682,770	10,199,612
1922	257,208	1,536,662

Manna.

	Pounds.	Dollars.
1871	.....	13,283
1881	35,456	15,061
1891	24,792	7,471
1901	24,883	12,084
1913	30,869	16,303
1914	88,240	32,848
1915	36,833	12,276
1916	68,447	32,434
1917	75,336	48,613
1918	93,097	51,032
1919	44,063	27,794
1920	112,818	52,145
1921	29,824	14,474
1922	32,768	15,025

Lime

	100 pounds.	Dollars.
1871	.....	11,315
1881	.....	24,968
1891	329,580	67,700
1901	477,755	65,413
1913	77,319	42,839
1914	65,036	42,926
1915	66,634	29,518
1916	92,321	42,537
1917	160,776	74,437
1918	147,080	77,733
1919	167,152	103,749
1920	278,646	219,986
1921	361,553	357,992
1922	224,189	241,580

Lime, Borate of

	Pounds.	Dollars.
1922	3,360,000	67,500

Not stated prior to 1922.

Lime, Chloride, or Bleaching Powder

	Pounds.	Dollars.
1871	32,111,839	635,910
1881	74,624,420	820,073
1891	111,156,006	1,431,470
1901	110,962,467	1,372,829
1913	76,092,327	619,492
1914	48,497,239	416,893
1915	18,402,130	197,975
1916	3,289,790	80,418
1917	65,564	3,888
1918	535	83
1919	539,596	11,363
1920	830,007	13,611
1921	4,584,344	144,029
1922	17,374,617	267,065

Lime, Citrate

	Pounds.	Dollars.
1891	28,358	4,337
1901	2,416,088	299,583
1913	5,526,954	756,309
1914	3,119,924	496,517
1915	6,242,244	1,102,629
1916	8,127,364	1,763,652
1917	6,301,458	1,554,577
1918	4,013,606	814,073
1919	2,773,095	1,136,057
1920	10,929,314	2,908,023
1921	5,060,407	1,104,576
1922	8,983,134	1,194,964

Litharge

	Pounds.	Dollars.
1871	70,889	3,870
1881	63,058	2,568
1891	87,970	4,334
1901	23,898	1,057
1913	34,022	1,649
1914	43,156	2,355
1915	14,779	774
1916	20,160	1,417
1917	220	42
1918	100	12
1919	.....	.....
1920	2	1
1921	21,100	2,653
1922	1,770	162

Lithopone

	Pounds.	Dollars.
1914	7,245,151	218,133
1915	6,185,345	195,828
1916	5,122,083	414,573
1917	231,869	20,591
1918	448,000	29,199
1919	233,338	17,678
1920	2,284,955	170,522
1921	3,270,179	249,014
1922	20,482,320	822,045

Not separately stated prior to 1914.

Litmus

	Pounds.	Dollars.
1881	.....	229
1891	.....	113
1901	.....	84
1913	.....	216
1914	.....	263
1915	.....	59
1916	.....	280
1917	.....	648
1918	.....	44
1919	5,016	4,177
1920	2,054	1,535
1921	5,303	3,419
1922	2,396	1,756

Quantity not stated prior to 1919.

Logwood

	Tons.	Dollars.
1881	72,018	1,362,983
1891	84,381	1,842,964
1901	54,480	857,991
1913	36,952	475,484
1914	30,172	379,754
1915	54,704	722,410
1916	134,819	3,437,388
1917	121,762	4,127,031
1918	55,354	1,175,049
1919	20,871	412,952
1920	45,073	1,144,455
1921	56,977	1,697,436
1922	31,418	644,812

Logwood and Other Dyewood Extracts

	Pounds.	Dollars.
1871	.....	12,537
1881	6,091,388	454,984
1891	3,282,227	376,803
1901	2,864,874	191,852
1913	2,258,206	111,575
1914	1,228,178	77,119
1915	2,061,368	144,207
1916	2,652,787	316,872
1917	1,147,448	164,711
1918	215,954	24,698
1919	265,774	51,041
1920	868,297	70,910
1921	116,185	25,500
1922	1,317,694	78,601

Mace, Unground

	Pounds.	Dollars.
1871	69,370	41,571
1881	86,914	30,111
1891	186,801	85,978
1901	321,146	78,785
1913	611,005	244,177
1914	287,976	112,178
1915	342,618	124,128
1916	426,096	130,796
1917	436,346	145,126
1918	371,746	118,168
1919	321,339	107,739
1920	552,040	184,357
1921	581,408	150,651
1922	734,025	131,543

Mace, Bombay, or Wild, Unground

	Pounds.	Dollars.
1915	5,714	771
1916	22,400	6,720
1917	40,984	4,090
1918	1,791	624
1919	.....	.....
1920	3,236	397
1921	1,986	249
1922	8,964	1,494

Not stated prior to 1915.

Madder, or Munjeet, or Indian Madder, Ground or Prepared.

	Pounds.	Dollars.
1871	7,532,380	795,968
1881	685,079	41,864
1891	672,260	39,806
1901	178,872	11,329
1913	30,602	2,803
1914	47,068	3,817
1915	29,327	3,524
1916	68,381	9,037
1917	78,852	12,472
1918	2,193	253
1919	.....	.....
1920	9,484	1,883
1921	11,226	2,817
1922	2,000	500

Manure Salts, Including Double Manure Salts, Not Specially Provided For.

	Tons.	Dollars.
1913	172,557	1,798,778
1914	260,977	2,757,013
1915	66,411	757,151
1916	2,278	42,368
1917	324	7,794
1918	225	9,047
1919	.....	.....
1920	240,899	8,215,063
1921	123,273	4,165,817
1922	81,442	957,343

Marshmallow or Althea Flowers or Leaves.

	Pounds.	Dollars.
1913	561	27
1914	.....	.....
1915	4,695	245
1916	8,161	1,126
1917	21,713	2,033
1918	10,779	1,239
1919	4,869	770
1920	48,525	10,566
1921	13,699	1,524
1922	.....	.....

Marshmallow or Althea Root, Crude.

	Pounds.	Dollars.
1913	4,270	538
1914	6,049	514
1915	6,645	1,209
1916	7,242	1,926
1917	23,120	5,846
1918	24,246	6,824
1919	12,519	5,316
1920	63,099	17,309
1921	25,493	5,491
1922	3,710	493

Matches, Friction or Lucifer.

		Dollars.
1871	.....	.....
1881	.....	17,676
1891	.....	88,041
1901	.....	176,909
1913	.....	721,081
1914	.....	889,838
1915	.....	653,699
1916	.....	909,430
1917	.....	1,880,808
1918	.....	3,343,800
1919	.....	1,406,151
1920	.....	945,297
1921	.....	1,135,284
1922	.....	1,904,709

Meat Extracts, Fluid.

	Pounds.	Dollars.
1913	29,091	11,096
1914	3,768	3,956
1915	3,738	4,428
1916	172	264
1917	1,990	3,632
1918	12	22
1919	1,613	1,677
1920	11,584	16,078
1921	2,497	2,117
1922	2,174	3,862

Meat Extracts, All Other.

	Pounds.	Dollars.
1913	106,313	138,489
1914	130,672	198,187
1915	97,656	139,936
1916	78,614	100,652
1917	93,108	155,766
1918	1,401	1,411
1919	9,482	12,111
1920	14,375	14,114
1921	87,283	57,737
1922	123,020	116,369

Menthol.

	Pounds.	Dollars.
1913	49,896	289,058
1914	27,924	408,954
1915	11,020	236,759
1916	145,203	300,589
1917	172,767	398,191
1918	172,450	446,386
1919	243,743	1,055,920
1920	181,160	1,208,908
1921	239,297	1,575,824
1922	162,263	770,694

Mercurial Medicinal Preparations, N. E. S.

	Pounds.	Dollars.
1921	6,769	8,149
1922	1,967	1,424

Not stated prior to 1921.

Metacresol, Orthocresol and Paracresol

	Pounds.	Dollars.
1918	20,708	1,404
1919	11,200	1,221
1920	2,240	2,055
1921	204	175
1922	3,290	518

Not stated prior to 1918.

Mica, Ground.

	Pounds.	Dollars.
1913	577,061	6,592
1914	401,603	4,002
1915	378,708	4,143
1916	436,037	4,302
1917	152,963	1,584
1918	111,037	1,384
1919	612	272
1920	6,995	10,223
1921	760	1,755
1922	285,295	4,289

Milk, Sugar of.

	Pounds.	Dollars.
1881	.....	21,084
1891	251,448	41,330
1901	3,638	619
1913	9,026	2,582
1914	578,727	67,901
1915	250,212	28,154
1916	22,400	3,101
1917	.....	.....
1918	.....	.....
1919	67,648	37,520
1920	190	285
1921	48,832	11,214
1922	.....	.....

Mineral Salts Obtained by Evaporation from Mineral Waters.

	Pounds.	Dollars.
1901	150,631	31,811
1913	103,337	35,420
1914	82,569	40,840
1915	10,757	9,642
1916	425	213
1917	626	313
1918	4,699,735	14,230
1919	1,414,450	10,237
1920	753,859	10,946
1921	97,708	13,814
1922	608,540	13,379

Monazite Sand and Thorite.

	Pounds.	Dollars.
1913	1,145,010	94,425
1914	170,792	12,984
1915	1,403,028	133,819
1916	2,468,146	191,576
1917	4,020,023	263,331
1918	4,961,385	332,383
1919	952,30a	55,898
1920	1,148,447	99,672
1921	1,036,420	71,745
1922	101,550	7,978

Morphia, or Morphine, Sulphate of.

	Ounces.	Dollars.
1871	237	1,066
1881	22,358	55,531
1891	29,564	42,269
1901	50,819	147,517
1913	24,797	141,221
1914	5,805	14,220
1915	1,383	3,300
1916	2,685	8,906
1917	5,584	22,675
1918	25,115	202,263
1919	25,370	158,307
1920	7,460	32,111
1921	1,550	4,594
1922	3,460	6,406

Moss and Seaweeds, Unmanufactured.

	Pounds.	Dollars.
1913	.....	159,189
1914	.....	246,196
1915	.....	183,029
1916	.....	224,928
1917	.....	182,868
1918	.....	234,465
1919	13,291,917	257,134
1920	6,872,608	460,070
1921	7,988,370	505,100
1922	7,744,683	477,453

Quantity not stated prior to 1919.

Musk, in Grain.

	Ounces.	Dollars.
1913	.....	7,699
1914	.....	3,991
1915	.....	665
1916	.....	534
1917	.....	63,304
1918	.....	29,246
1919	6,269	7,158
1920	414	3,228
1921	3,059	30,985
1922	2,198	25,989

Quantity not stated prior to 1919.

Musk, in Pod

	Ounces.	Dollars.
1891	6,167	59,291
1901	9,353	71,309
1913	12,994	124,855
1914	3,331	30,373
1915	10,115	65,882
1916	7,390	62,094
1917	12,415	80,026
1918	5,516	33,970
1919	10,240	176,008
1920	16,658	261,320
1921	5,823	96,788
1922	5,352	70,314

Myrobolans Fruit

	Pounds.	Dollars.
1913	19,736,724	195,264
1914	24,256,373	438,672
1915	18,417,434	198,347
1916	25,612,765	375,401
1917	16,087,463	421,824
1918	4,408,522	110,444
1919	9,597,836	188,517
1920	62,196,177	993,932
1921	28,077,222	372,205
1922	28,567,166	194,165

Naphthalene, Solidfying at Less Than 79 Degree C.

	Pounds.	Dollars.
1918	3,579,187	146,655
1919	3,591,108	109,381
1920	6,113,768	165,383
1921	13,925,789	515,078
1922	2,344,951	52,496

Not stated prior to 1918.

Naphthalene, Solidifying at 79 Degree C. or Above

	Pounds.	Dollars.
1918	92,888	4,998
1919	60	10
1920	161,871	8,076
1921	3,974,776	439,233
1922	53,496	5,455

Not stated prior to 1918.

Naphthol

	Pounds.	Dollars.
1921	54,341	64,248
1922	279,623	49,353

Not stated prior to 1921.

Naphthylamine

	Pounds.	Dollars.
1918	11,761	5,895
1919	.....	.....
1920	.....	.....
1921	69,695	7,208
1922	.....	.....

Not stated prior to 1918.

Nickel Oxides

	Pounds.	Dollars.
1913	1,124	398
1914	2,720	1,245
1915	1,071	505
1916	497	130
1917	21,488	6,478
1918	5,534	1,406
1919	7,774	2,430
1920	1,076	324
1921	1,155	165
1922	60,698	17,414

Nitrobenzol

	Pounds.	Dollars.
1920	43,623	7,222
1921	23,781	2,790
1922	.....	.....

Not stated prior to 1920.

Nitrophenylenediamine

	Pounds.	Dollars.
1922	1,132	6,590

Not stated prior to 1922.

Nitrotoluol

	Pounds.	Dollars.
1921	684	259
1922	.....	.....

Not stated prior to 1921.

Nuts and Nutgalls for Dyeing and Tanning

	Pounds.	Dollars.
1901	.....	248,746
1913	.....	126,435
1914	.....	177,788
1915	.....	137,972
1916	.....	420,030
1917	.....	214,653
1918	.....	872,173
1919	1,760,746	302,975
1920	2,776,978	647,268
1921	2,248,951	532,070
1922	565,508	75,496

Quantity not stated prior to 1919.

Imports Into the United States

Nutgall, Extract

	Pounds	Dollars
1913	145,919	18,228
1914	205,130	25,017
1915	157,084	23,262
1916	61,055	11,444
1917	45,700	9,867
1918	36,475	12,761
1919	34,033	12,508
1920	48,654	26,565
1921	4,219	1,114
1922	32,458	5,192

Nutmegs, Unground

	Pounds.	Dollars.
1871	919,990	390,175
1881	999,504	573,917
1891	1,324,893	684,277
1901	1,922,689	376,447
1913	3,458,339	368,984
1914	1,755,653	184,779
1915	2,879,986	283,861
1916	3,590,959	420,503
1917	4,201,872	661,012
1918	3,437,056	528,950
1919	3,893,019	674,016
1920	3,651,319	921,849
1921	3,474,243	576,103
1922	3,916,059	447,349

Nux Vomica

	Pounds.	Dollars.
1871	496,639	13,972
1881	1,172,909	17,649
1891	1,394,813	32,930
1901	1,581,757	30,560
1913	2,306,735	39,380
1914	1,891,072	32,983
1915	2,245,338	51,507
1916	4,355,964	134,866
1917	2,445,984	86,018
1918	2,739,804	111,711
1919	4,543,710	348,559
1920	4,470,323	275,904
1921	3,190,255	272,533
1922	1,063,608	70,998

Oak Extract for Tanning Containing No Alcohol

	Pounds.	Dollars.
1921	1,484,032	84,353
1922	496,679	27,557

Not stated prior to 1921.

Ocher and Ochery Earths

	Pounds.	Dollars.
1871	2,954,716	40,270
1881	3,589,600	65,393
1891	6,823,251	79,465
1901	7,410,929	55,501
1913	17,583,272	162,387
1914	21,641,976	154,547
1915	17,430,128	124,359
1916	18,049,375	153,880
1917	17,873,109	213,272
1918	7,087,557	131,055
1919	13,577,765	341,701
1920	13,264,966	229,526
1921	25,172,178	324,496
1922	11,856,246	198,701

Oilcake, Coconut

	Pounds.	Dollars.
1917	29,867	400
1918	34,824	355
1919	3,474,947	51,637
1920	80,903,960	1,535,468
1921	117,208,327	2,038,122
1922	37,162,444	955,691

Not stated prior to 1917.

Oilcake, Corn

	Pounds.	Dollars.
1913	102,700	1,282
1914	91,700	1,227
1915	37,500	422
1916	10,900	191
1917	15,200	324
1918	86,520	2,967
1919	1,090	29
1920	.....	.....
1921	.....	.....
1922	.....	.....

Oilcake, Cottonseed

	Pounds.	Dollars.
1901	.....	.....
1913	400,686	3,322
1914	5,744,090	53,214
1917	1,743,113	15,706
1916	10,289,336	108,412
1917	34,281,702	372,812
1918	29,877,055	456,848
1919	51,377,272	1,049,182
1920	35,093,455	824,834
1921	22,061,743	423,801
1922	3,890,509	51,046

Oilcake, Cottonseed and Linseed (Bibby's)

	Pounds.	Dollars.
1913	2,571,694	37,455
1914	2,406,035	24,332
1915	2,996,201	38,238
1916	10,819,746	129,843
1917	6,570,668	82,808
1918	2,751,880	84,985
1919	2,502,984	54,750
1920	1,998,424	56,740
1921	4,773,303	107,794
1922	8,209,010	151,800

Oilcake, Peanut

	Pounds.	Dollars.
1920	1,120,277	30,006
1921	101,072	2,188
1922	.....	.....

Not stated prior to 1920.

Oilcake, Rapeseed

	Pounds.	Dollars.
1913	.....	.....
1914	.....	.....
1915	47,278	11,204
1916	4,125	75
1917	2,000	26
1918	2,240	101
1919	.....	.....
1920	1,811,800	48,742
1921	38,404	445
1922	97,175	3,849

Oilcake, Soya Bean

	Pounds.	Dollars.
1913	7,004,803	93,002
1914	3,163,260	38,255
1915	5,975,592	64,307
1916	10,468,001	103,081
1917	11,760,935	136,064
1918	586,820	9,964
1919	2,763,090	129,277
1920	16,273,785	408,895
1921	31,226,207	655,805
1922	17,701,339	339,021

Oilcake, All Other Bean

	Pounds.	Dollars.
1913	579,794	5,914
1914	142,878	1,685
1915	724,072	13,035
1916	4,802,119	53,173
1917	895,079	11,400
1918	1,389,434	17,628
1919	614,192	14,508
1920	2,056,639	42,082
1921	10,374,980	269,166
1922	4,591,694	105,311

Oilcake, All Other

	Pounds.	Dollars.
1901	1,749	172
1919	352,049	23,437
1920	4,832,987	111,056
1921	10,946,891	209,299
1922	3,975,911	52,876

Not stated prior to 1919.

Oilcake, Meal

	Pounds.	Dollars.
1915	.....	5,575
1916	.....	5,629
1917	.....	1,320
1918	724,973	14,775
1919	465,132	8,979
1920	1,829	96
1921	110,846	1,520
1922	392,430	4,624

Not stated prior to 1915; quantity not stated prior to 1918.

Oil, Alizarin Assistant, Etc., and Soaps Containing Castor Oil

	Gallons.	Dollars.
1891	1,469	818
1901	24,716	11,355
1913	137,187	62,923
1914	186,234	72,430
1915	48,376	18,820
1916	7,382	4,134
1917	5,193	3,010
1918	24	24
1919	47,008	32,121
1920	27	24
1921	1,147	711
1922	1,187	708

Oil, Almond, Bitter

	Pounds.	Dollars.
1871	1,440	14,122
1881	3,642	12,342
1891	4,795	9,958
1901	4,096	9,998
1913	10,442	25,629
1914	7,525	21,954
1915	2,711	9,184
1916	3,602	18,400
1917	4,128	27,751
1918	1,887	18,154
1919	1,333	14,427
1920	4,428	19,245
1921	4,825	14,979
1922	4,461	18,270

Oil, Almond, Sweet

	Pounds.	Dollars.
1871	18,959	5,681
1881	34,325	12,641
1891	51,384	12,249
1901	81,074	17,512
1913	152,300	63,583
1914	52,550	22,777
1915	43,321	23,495
1916	68,838	36,400
1917	38,939	23,431
1918	36,283	25,052
1919	29,586	26,456
1920	55,096	33,420
1921	43,515	21,963
1922	71,418	29,773

Oil, Amber

	Pounds.	Dollars.
1871	2,279	583
1881	6,211	1,431
1891	3,444	894
1901	38,082	3,304
1913	18,707	1,027
1914	15,648	1,058
1915	2,720	239
1916	674	250
1917	7,580	2,932
1918	1,080	458
1919	3,900	4,530
1920	2,227	1,938
1921	1,084	354
1922	1,840	653

Oil, Ambergris

	Pounds.	Dollars.
1891	78	1,509
1901	26	2,258
1919	2	212
1920	.....	.....
1921	.....	.....
1922	3	409

Not stated where figures are not given.

Oil, Animal, Rendered and Combinations of, Not Specially Provided For

	Gallons.	Dollars.
1913	4,030	2,023
1914	115,871	23,527
1915	140,815	30,464
1916	93,135	31,985
1917	56,915	40,243
1918	23,028	19,757
1919	13,968	9,580
1920	2 685	2,498
1921	2,739	2,386
1922	5,101	2,555

Oil, Anise, or Anise Seed

	Pounds.	Dollars.
1871	10,475	16,355
1881	27,232	49,660
1891	37,335	55,556
1901	57,564	67,926
1913	127,501	173,078
1914	42,672	55,692
1915	117,188	119,972
1916	206,609	156,411
1917	266,686	150,849
1918	160,774	122,459
1919	77,757	72,836
1920	218,382	227,172
1921	225,829	141,497
1922	42,230	21,638

Oil, Bergamot

	Pounds.	Dollars.
1871	30,592	93,260
1881	41,796	95,390
1891	44,110	131,801
1901	75,640	143,740
1913	64,259	310,835
1914	38,647	148,753
1915	58,621	157,519
1916	69,440	178,303
1917	59,634	179,182
1918	57,689	241,465
1919	41,262	185,318
1920	92,708	369,727
1921	33,565	143,667
1922	62,566	249,302

Oil, Birch Tar

	Pounds.	Dollars.
1914	40,123	1,808
1915	12,098	571
1916	47,757	3,183
1917	24,073	3,717
1918	110,055	22,443
1919	.....	.....
1920	220	108
1921	2,467	510
1922	3,705	1,142

Not stated prior to 1914.

Oil, Cajeput

	Pounds.	Dollars.
1871	1,864	1,103
1881	7,019	4,421
1891	22,260	9,827
1901	12,350	4,472
1913	9,143	3,224
1914	14,119	4,757
1915	19,243	6,999
1916	96,626	18,992
1917	79,585	29,585
1918	10,563	3,538
1919	18,853	11,239
1920	27,775	18,629
1921	7,375	2,601
1922	2,904	1,515

Oil, Camomile

	Pounds.	Dollars.
1881	25	316
1891	19	249
1901	25	456
1913	4½	88
1914	12	247
1915	3	67
1916	.....	.....
1917	.....	.....
1918	5	60
1919	.....	.....
1920	15	233
1921	11	128
1922	10	438

Oil, Camphor

	Pounds.	Dollars.
1913	.....	.....
1914	18,874	3,160
1915	68	12
1916	8,333	5,708
1917	224	899
1918	236,000	21,245
1919	131	56
1920	3,635	1,270
1921	39,140	6,688
1922	7,568	2,721

Oil, Caraway

	Pounds.	Dollars.
1871	6,305	8,772
1881	7,522	10,799
1891	.....	.....
1901	17,800	9,692
1913	10,107	10,453
1914	3,669	5,063
1915	18,107	20,730
1916	15,567	23,536
1917	3,723	4,208
1918	4,982	22,432
1919	.....	.....
1920	6,857	23,531
1921	6,671	11,388
1922	2,926	4,295

Oil, Cassia and Cinnamon

	Pounds.	Dollars.
1871	25,734	26,754
1881	104,900	82,885
1891	27,989	22,732
1901	84,262	61,141
1913	123,645	97,438
1914	79,155	49,528
1915	54,962	34,411
1916	121,034	85,974
1917	153,244	130,112
1918	109,178	114,796
1919	123,150	201,295
1920	174,855	286,122
1921	102,010	133,551
1922	114,697	89,789

Oil, Castor

	Gallons.	Dollars.
1871	29,314	20,241
1881	1,464	959
1891	2,073	1,287
1901	462	292
1913	5,241	6,353
1914	189,583	88,053
1915	63,005	29,206
1916	253,077	223,150
1917	323,703	286,068
1918	1,175,064	1,366,573
1919	482,216	845,682
1920	271,425	298,001
1921	99,017	124,315
1922	45,734	35,260

Oil, Cedrat

	Pounds.	Dollars.
1891	311	2,836
1901	92	519
1913	115	555
1914	159	770
1915	788	3,721
1916	438	1,966
1917	.....	.....
1918	20	158
1919	336	531
1920	5	12
1921	.....	.....
1922	.....	.....

Oil, Chinese Nut

	Gallons.	Dollars.
1871	131,832	79,881
1881	18,428	8,682
1891	67,312	30,641
1901	365,747	169,892
1913	6,004,045	2,738,000
1914	4,878,764	1,960,426
1915	4,723,584	1,649,270
1916	4,908,262	1,977,823
1917	6,846,631	4,046,132
1918	4,818,740	4,038,072
1919	6,218,557	7,248,054
1920	10,613,638	12,736,431
1921	4,439,975	4,817,082
1922	7,409,572	5,141,969

Oil, Citronella and Lemon Grass

	Pounds.	Dollars.
1871	18,202	13,535
1881	103,152	84,290
1891	355,735	73,764
1901	288,247	59,593
1913	885,486	287,579
1914	702,516	263,149
1915	865,376	307,676
1916	1,054,211	387,631
1917	1,082,035	445,732
1918	900,853	369,234
1919	549,837	246,576
1920	1,062,821	673,023
1921	586,697	402,686
1922	1,219,669	462,132

Oil, Civet

	Ounces.	Dollars.
1881	.....	38
1891	.....	.....
1901	782	1,326
1913	1,165	1,688
1914	250	392
1915	5,181	7,365
1916	.....	.....
1917	.....	.....
1918	3,277	5,136
1919	361	800
1920	3,000	7,290
1921	1,504	3,711
1922	1,771	1,751

Oil, Coconut, Not Refined or Deodorized

	Pounds.	Dollars.
1871	195,462	87,288
1881	577,624	297,492
1891	10,665,054	560,833
1901	27,055,646	1,386,247
1913	50,493,858	4,182,654
1914	74,588,195	6,726,107
1915	63,249,424	5,430,581
1916	66,574,349	6,052,225
1917	79,359,009	9,141,536
1918	259,004,748	30,919,783
1919	347,200,288	43,769,146
1920	269,226,961	38,588,135
1921	166,417,897	20,287,334
1922	30,477,796	16,274,425

Quantity stated in gallons after 1921.

Oil, Cod

	Gallons.	Dollars.
1913	466,494	135,969
1914	1,091,246	382,992
1915	1,372,413	433,142
1916	1,578,227	678,327
1917	1,163,566	728,804
1918	1,747,791	1,526,332
1919	932,948	1,091,722
1920	1,535,876	1,500,353
1921	877,521	561,195
1922	1,775,219	600,672

Oil, Codliver

	Gallons.	Dollars.
1871	.....	20,476
1881	144,771	45,300
1891	249,894	98,865
1901	235,949	137,765
1913	262,516	137,872
1914	371,567	232,927
1915	264,630	157,090
1916	170,876	334,006
1917	265,557	659,192
1918	264,108	585,172
1919	161,291	449,014
1920	407,481	962,427
1921	337,139	506,849
1922	262,763	169,078

Oil, Cottonseed

	Pounds.	Dollars.
1881	20	7
1891	.....	.....
1901	8,185	6,259
1913	3,383,906	185,396
1914	17,510,918	1,046,703
1915	15,162,360	728,961
1916	17,516,391	924,654
1917	12,961,339	985,616
1918	14,378,013	1,639,882
1919	20,964,012	2,685,027
1920	24,164,821	3,255,228
1921	1,315,265	131,334
1922	32	25

Subject to duty after 1921.

Oil, Creosote, or Dead

	Gallons.	Dollars.
1901	2,072,428	155,331
1913	63,997,602	3,711,328
1914	59,271,677	3,822,919
1915	37,352,340	2,541,845
1916	40,496,987	3,206,780
1917	29,066,915	2,183,859
1918	3,857,869	329,846
1919	9,694,960	1,096,319
1920	8,338,761	1,171,717
1921	27,779,736	5,887,340
1922	39,143,044	3,965,786

Oil, Croton

	Pounds.	Dollars.
1871	4,571	4,744
1881	2,542	2,112
1891	59	35
1901	462	219
1913	4,873	4,414
1914	6,186	5,649
1915	4,010	3,481
1916	.....	.....
1917	500	503
1918	1,200	1,274
1919	.....	.....
1920	2,478	3,142
1921	2,502	2,491
1922	1,800	1,813

Oil, Essential and Distilled, Not Elsewhere Specified

		Dollars.
1901	.....	235,699
1913	.....	821,395
1914	.....	804,505
1915	.....	743,076
1916	.....	767,719
1917	.....	970,736
1918	.....	1,142,496
1919	.....	309,971
1920	.....	2,740,152
1921	.....	2,198,699
1922	.....	1,622,947

Oil, Eucalyptus

	Pounds.	Dollars.
1913	31,047	7,205
1914	68,053	21,079
1915	99,218	27,095
1916	110,736	29,993
1917	230,035	83,111
1918	269,275	97,874
1919	116,781	43,639
1920	291,492	137,190
1921	156,394	70,681
1922	175,901	66,871

Oil, Fennel

	Pounds.	Dollars.
1871	373	392
1881	1,815	2,331
1891	774	463
1901	1,839	1,353
1913	5,702	4,160
1914	4,078	2,416
1915	409	441
1916	610	789
1917	.....	.....
1918	2,094	2,512
1919	661	942
1920	1,437	2,211
1921	20	30
1922	972	1,026

Oil, Fish (Not Specially Provided for), Including Sod Oil

	Gallons.	Dollars.
1901	494,036	122,360
1913	519,121	152,803
1914	517,502	154,775
1915	439,741	108,739
1916	720,033	235,536
1917	2,280,013	863,059
1918	1,532,512	772,721
1919	1,263,374	1,019,195
1920	547,545	403,545
1921	324,646	166,792
1922	285,695	67,648

Oil, Fixed or Expressed, Not Elsewhere Specified

	Pounds.	Dollars.
1901	.....	21,163
1913	.....	61,027
1914	.....	49,053
1915	.....	65,437
1916	.....	118,295
1917	.....	79,889
1918	.....	138,660
1919	1,088,636	174,463
1920	644,211	134,481
1921	554,659	85,459
1922	371,440	52,828

Quantity not stated prior to 1919.

Imports Into the United States

Oil, Fusel or Amylic and Butyl Alcohol

	Pounds.	Dollars.
1871	3,500	2,063
1881	961	290
1891	345,001	16,780
1901	2,572,343	139,190
1913	5,116,660	1,183,872
1914	5,679,801	888,869
1915	3,298,228	699,512
1916	2,162,617	695,196
1917	1,614,507	629,414
1918	1,706,528	546,589
1919	1,464,500	386,416
1920	6,192,079	1,199,995
1921	1,083,336	274,423
1922	552,036	101,636

Oil, Hempseed

	Gallons	Dollars.
1881	10,615	6,751
1891	140,163	66,744
1901	528,763	254,216
1913	.....	.....
1914	375	128
1915	.....	.....
1916	10	5
1917	.....	.....
1918	25,000	21,654
1919	162,131	152,365
1920	161,346	157,596
1921	20,868	23,532
1922	16,000	7,567

Oil, Jasmine

	Pounds.	Dollars.
1881	.....	1,629
1891	441	283
1901	1,097	3,705
1913	3,416	39,554
1914	611	14,360
1915	261	5,160
1916	978	27,592
1917	348	8,366
1918	5,840	89,310
1919	12,227	204,005
1920	3,888	145,641
1921	2,115	110,957
1922	622	16,413

Oil, Juniper

	Pounds.	Dollars.
1871	7,672	4,758
1881	7,073	4,147
1891	5,798	2,778
1901	13,155	5,226
1913	17,356	13,037
1914	14,545	8,891
1915	10,388	7,637
1916	975	1,988
1917	4,661	21,514
1918	21,346	67,147
1919	1,146	6,758
1920	8,885	37,019
1921	12,546	39,000
1922	15,612	20,293

Oil, Lavender, and Aspic or Spike Lavender

	Pounds.	Dollars.
1881	38,167	58,100
1891	92,224	102,819
1901	102,402	101,329
1913	227,013	482,779
1914	64,541	100,431
1915	72,989	133,375
1916	198,205	271,815
1917	144,663	237,081
1918	122,958	273,466
1919	111,411	240,823
1920	173,878	364,865
1921	84,626	183,488
1922	163,500	260,590

Oil, Lemon

	Pounds.	Dollars.
1891	151,460	225,755
1901	268,341	231,041
1913	410,003	794,215
1914	329,440	752,714
1915	561,387	630,338
1916	435,030	360,862
1917	557,288	459,179
1918	577,600	452,681
1919	345,799	327,370
1920	769,488	917,214
1921	543,489	559,970
1922	684,118	574,084

Oil, Lemon and Orange

	Pounds.	Dollars.
1871	67,619	144,405
1881	88,480	181,495

Stated separately after 1881.

Oil, Limes

	Pounds.	Dollars.
1891	3,681	4,063
1901	5,904	5,980
1913	13,075	15,025
1914	16,559	23,828
1915	9,154	9,279
1916	19,765	29,694
1917	26,551	49,001
1918	29,137	73,685
1919	16,272	24,273
1920	61,824	87,873
1921	51,296	101,928
1922	27,200	24,343

Oil, Linseed or Flaxseed, Raw, Boiled or Oxidized

	Gallons.	Dollars.
1871	39,424	24,806
1881	9,682	4,711
1891	11,629	5,828
1901	14,036	7,598
1913	172,522	110,840
1914	187,933	91,544
1915	537,810	249,611
1916	56,899	36,399
1917	110,809	76,530
1918	51,271	34,370
1919	957,573	1,199,911
1920	4,566,008	6,583,515
1921	1,996,250	1,905,330
1922	22,463,851	11,957,084

Oil, Mace

	Pounds.	Dollars.
1871	187	160
1881	355	321
1891	605	613
1901	685	440
1913	5,737	2,611
1914	2,652	1,380
1915	4,776	2,605
1916	3,400	2,224
1917	3,000	2,414
1918	.....	.....
1919	.....	.....
1920	200	468
1921	.....	.....
1922	215	251

Oil, Mineral, Crude, Petroleum

	Gallons.	Dollars.
1871	356	102
1881	694	160
1891	.....	214
1901	118	17
1913	450,542,222	7,608,796
1914	843,080,788	11,779,938
1915	653,757,824	8,918,138
1916	859,736,962	12,226,179
1917	1,036,417,009	14,181,349
1918	1,348,419,493	18,239,207
1919	1,929,339,105	24,166,677
1920	2,824,332,765	33,791,375
1921	5,609,224,120	71,030,595
1922	4,710,620,837	72,960,648

Oil, Mineral, Refined, Benzine

	Gallons.	Dollars.
1913	14,162,423	1,266,896
1914	16,152,167	1,399,630
1915	6,783,627	727,855
1916	5,100	2,150

Not stated separately after 1916.

Oil, Mineral, Refined, Gasoline and Naphtha

	Gallons.	Dollars.
1913	570	118
1914	14,175	1,992
1915	1,136,797	34,701
1916	2,638	458

Not stated separately after 1916.

Oil, Mineral, Refined Benzine, Gasoline and Naphtha

	Gallons.	Dollars.
1917	10,744,592	1,396,101
1918	11,069,898	1,473,027
1919	11,760,856	1,867,863
1920	25,637,592	3,147,635
1921	31,778,815	3,711,948
1922	69,319,919	5,607,943

Oil, Mineral, Refined, All Other

	Gallons.	Dollars.
1871	152	176
1881	21	7
1891	826,801	34,098
1901	24,532	5,897
1913	1,464,412	307,479
1914	1,796,093	430,664
1915	496,968	98,696
1916	1,727,683	134,815
1917	32,259,588	2,221,816
1918	43,927,718	2,406,764
1919	37,299,989	2,585,007
1920	59,040,338	3,945,468
1921	97,728,455	7,138,962
1922	112,073,487	7,179,162

Oil, Neroli, or Orange Flower

	Pounds.	Dollars.
1891	2,757	51,984
1901	4,319	41,922
1913	38,365	171,932
1914	15,928	73,265
1915	13,251	31,478
1916	34,447	66,768
1917	23,639	66,394
1918	32,687	72,370
1919	10,595	52,853
1920	49,835	214,919
1921	22,780	95,207
1922	29,945	61,840

Oil, Nut, Except Chinese Nut

	Gallons.	Dollars.
1922	352,491	257,507

Not stated prior to 1922.

Oil, Olive (for Manufacturing Purposes Only)

	Gallons.	Dollars.
1871	139,051	111,450
1881	172,030	112,916
1891	503,947	242,889
1901	1,303,474	530,607
1913	725,100	483,329
1914	799,260	509,093
1915	717,361	498,689
1916	919,633	711,468
1917	787,348	736,520
1918	166,115	148,672
1919	119,842	185,767
1920	255,835	434,561
1921	261,689	267,579
1922	1,037,021	604,929

Oil, Olive, Edible

	Gallons.	Dollars.
1871	142,476	257,868
1881	216,788	380,428
1891	600,936	731,006
1901	991,799	1,180,443
1913	4,772,775	6,227,526
1914	6,391,827	8,201,831
1915	6,622,248	8,116,512
1916	6,924,606	9,324,361
1917	7,707,094	10,769,754
1918	2,562,538	2,935,457
1919	4,071,766	7,573,551
1920	6,640,601	14,887,944
1921	4,683,204	12,214,272
1922	7,432,164	11,621,248

Oil, Orange

	Pounds.	Dollars.
1891	27,952	44,500
1901	72,218	109,832
1913	77,797	155,290
1914	104,491	222,118
1915	97,014	140,246
1916	97,359	134,025
1917	170,722	322,373
1918	196,846	330,507
1919	126,532	246,202
1920	282,349	958,514
1921	155,765	543,098
1922	210,034	558,374

Oil, Origanum, Red or White

	Pounds.	Dollars.
1871	33,612	17,526
1881	31,398	14,979
1891	.....	.....
1901	10,305	2,205
1913	8,822	8,502
1914	507	630
1915	14,349	15,111
1916	24,222	24,291
1917	54,071	45,859
1918	3,851	3,424
1919	2,637	5,506
1920	11,522	28,906
1921	8,950	16,438
1922	.....	.....

Oil, Palm

	Pounds.	Dollars.
1881	9,325,090	309,355
1891	3,507,223	135,879
1901	8,081,252	419,466
1913	48,442,662	3,368,815
1914	61,753,482	4,118,077
1915	31,482,292	2,024,827
1916	40,621,318	2,918,523
1917	36,074,059	3,316,417
1918	27,408,494	2,527,872
1919	19,280,762	1,651,230
1920	50,165,387	6,529,094
1921	31,076,224	2,765,953
1922	39,159,342	2,420,742

Oil, Palm Kernel

	Pounds.	Dollars.
1913	23,570,152	1,850,270
1914	30,588,958	2,826,972
1915	4,908,702	446,979
1916	6,273,340	479,738
1917	1,857,038	197,237
1918	18,018	2,583
1919	1,945,345	144,826
1920	53,508	9,900
1921	2,769 144	316,754
1922	2,489,490	209,551

Oil, Paraffin

	Gallons.	Dollars.
1913	116,192	35,193
1914	167,584	55,923
1915	60,412	11,609
1916	774,250	149,625
1917	409,746	40,710
1918	24,628	7,502
1919	551,142	75,451
1920	819,111	161,792
1921	4,344	3,792
1922	429,361	53,744

Oil, Peanut

	Gallons.	Dollars.
1913	1,221,676	820,359
1914	1,332,108	915,439
1915	830,638	565,707
1916	1,466,043	824,327
1917	3,018,468	2,028,096
1918	8,279,927	7,296,214
1919	11,393,615	11,493,969
1920	22,025,653	27,752,099
1921	2,444,794	2,347,980
1922	375,819	314,989

Oil, Peppermint

	Pounds.	Dollars.
1891	3,049	3,918
1901	1,201	1,353
1913	3,529	13,097
1914	18,794	41,367
1915	9,200	8,959
1916	17,066	12,573
1917	23,159	37,734
1918	29,360	28,953
1919	118,741	139,466
1920	148,227	270,333
1921	28,732	31,596
1922	6,648	9,827

Oil, Perilla

	Pounds.	Dollars.
1913	.....	.....
1914	117,893	6,090
1915	66,174	5,485
1916	65,509	5,504
1917	442,619	39,276
1918	1,015,953	105,723
1919	1,430,163	201,412
1920	8,107,141	1,376,738
1921	3,783,757	466,504
1922	1,899,352	155,665

Oil, Poppy Seed, Raw, Boiled or Oxidized

	Gallons.	Dollars.
1881	.....	1,279
1891	7,604	4,627
1901	3,125	2,388
1913	9 605	7,788
1914	7,973	6,422
1915	11,645	7,972
1916	6,337	6,816
1917	2,789	3,734
1918	20	112
1919	1,296	1,952
1920	422	1,451
1921	1,051	2,420
1922	1,691	1,754

Oil, Rapeseed

	Gallons.	Dollars.
1881	.....	.....
1891	577,684	13,390
1901	.....	.....
1913	1,564,659	784,750
1914	1,463,099	704,747
1915	1,491,999	784,235
1916	2,534,679	1,414,022
1917	1,095,391	651,314
1918	2,751,875	2,697,152
1919	2,091,052	2,264,594
1920	1,229,526	1,525,747
1921	1,171,930	1,103,134
1922	1,351,827	929,370

Oil, Rosemary, or Anthoss

	Pounds.	Dollars.
1881	.....	6,597
1891	64,361	33,346
1901	31,283	14,723
1913	284,144	100,930
1914	85,243	30,177
1915	93,663	44,636
1916	95,815	30,544
1917	228,080	71,035
1918	204,105	71,541
1919	51,146	36,101
1920	309,210	228,749
1921	44,848	35,001
1922	159,250	63,755

Oil, Roses, Attar of

	Ounces.	Dollars.
1871	10,146	46,242
1881	13,168	75,130
1891	43,599	188,612
1901	45,482	192,874
1913	133,325	791,370
1914	40,454	301,000
1915	60,011	252,592
1916	40,887	169,744
1917	11,235	85,673
1918	22,653	89,049
1919	24,827	210,925
1920	80,094	657,890
1921	36,886	263,980
1922	27,709	199,923

Oil, Seal

	Gallons.	Dollars.
1871	188,076	100,984
1881	100	72
1891	250	97
1901	1,294	458
1913	8,972	3,131
1914	179,734	64,963
1915	479,571	166,836
1916	510,062	271,979
1917	518,657	301,138
1918	143,262	109,328
1919	583,553	612,241
1920	27,951	25,101
1921	107,802	29,726
1922	316,394	88,092

Oil, Sesame, or Sesamum Seed

	Pounds.	Dollars.
1871	6,012	427
1881	540,520	40,519
1891	328,091	22,084
1901	626,189	48,637
1913	1,936,647	158,442
1914	1,389,649	118,075
1915	341,545	28,653
1916	257,874	22,293
1917	76,057	11,874
1918	346,211	51,178
1919	2,335,193	357,564
1920	5,237,695	804,529
1921	79,274	15,493
1922	55,182	10,877

Oil, Soya Bean

	Pounds.	Dollars.
1913	12,440,406	635,882
1914	16,363,645	830,870
1915	19,210,028	901,643
1916	98,171,275	5,131,582
1917	162,734,010	11,410,606
1918	336,999,646	32,836,034
1919	244,104,805	28,878,540
1920	196,108,919	25,280,085
1921	49,843,640	3,991,747
1922	380,413	152,975

Quantity stated in gallons after 1921.

Oil, Thyme

	Pounds.	Dollars.
1871	725	737
1881	30,401	16,023
1891	49,487	20,549
1901	57,634	29,729
1913	138,972	105,296
1914	89,148	63,864
1915	99,580	88,498
1916	92,097	85,913
1917	91,163	90,868
1918	206,185	242,254
1919	98,324	135,914
1920	102,973	179,370
1921	81,327	116,565
1922	156,906	206,626

Oil, Valerian

	Pounds.	Dollars.
1871	31	283
1881	117	690
1891	.....	.....
1901	61	148
1913	40	124
1914	6	12
1915	15	36
1916	.....	.....
1917	.....	.....
1918	366	3,690
1919	.....	.....
1920	57	323
1921	.....	.....
1922	40	110

Oil, Whale (Includes Sperm Oil Prior to October 3, 1913)

	Gallons.	Dollars.
1871	146,797	82,758
1881	65,100	22,915
1891	51,005	14,813
1901	1,322	311
1913	1,166,339	278,208
*1914	82,756	26,553

* July 1 to October 3, 1913. Stated separately after October 3, 1913.

Oil, Whale, Sperm

	Gallons.	Dollars.
1914	157,142	66,652
1915	92,033	38,612
1916	59,816	25,191
1917	48,178	37,512
1918	60,328	70,229
7919	99,347	120,416
1920	124,183	102,128
1921	1,739	637
1922	24,720	13,594

Oil, Whale, All Other

	Gallons.	Dollars.
1914	290,745	94,424
1915	604,503	215,644
1916	230,762	79,569
1917	415,163	234,097
1918	1,134,021	574,907
1919	156,915	133,998
1920	508,770	625,590
1921	308,917	113,120
1922	4,298,822	2,520,265

Oleo, Stearin

	Pounds.	Dollars.
1913	9,540,347	967,000
1914	5,679,535	497,973
1915	2,644,460	226,661
1916	910,478	81,280
1917	1,113,277	114,640
1918	6,575,379	1,118,413
1919	1,601,574	314,308
1920	1,307,847	274,545
1921	842,908	92,279
1922	378,222	32,596

Opium, Aqueous Extract of, and Tinctures of, as Laudanum, Etc.

		Dollars.
1891	.....	219
1901	.....	660
1913	.....	671
1914	.....	5,279
1915	.....	5,565
1916	.....	6
1917	.....	222
1918	.....	.....
1919	.....	70
1920	.....	46
1921	.....	976
1922	.....	1,216

Opium, Crude, or Unmanufactured, Not Adulterated

	Pounds.	Dollars.
1871	188,620	918,974
1881	385,059	1,791,415
1891	621,749	1,582,461
1901	491,448	1,030,209
1913	441,277	2,130,154
1914	441,621	1,731,589
1915	353,006	1,699,217
1916	117,870	533,183
1917	43,016	330,652
1918	21,341	265,283
1919	74,264	977,596
1920	420,976	4,539,465
1921	78,842	428,188
1922	149,146	408,993

Opium, Dried

	Pounds.	Dollars.
1871	37,825	353,334
1881	76,446	761,349
1891	61,341	453,369
1901	139,519	1,141,518
1913	49,071	389,864
1914	32,095	205,684
1915	38,977	308,928
1916	44,052	243,790
1917	77,990	640,563
1918	98,498	1,514,127
1919	101,998	1,776,787
1920	1,672	14,433
1921	149	436
1922	1,525	5,869

Opium Salts and Other Alkaloids of, Not Specially Provided for

	Ounces.	Dollars.
1871	.....	89
1881	97	15
1891	.....	.....
1901	.....	.....
1913	9,672	28,587
1914	11,593	64,528
1915	8,626	49,584
1916	2,360	9,981
1917	34,179	165,028
1918	20,479	126,882
1919	56,805	318,361
1920	28,793	155,979
1921	573	1,315
1922	4,625	17,646

Orange Mineral

	Pounds.	Dollars.
1891	1,827,569	87,405
1901	869,251	50,587
1913	287,535	18,595
1914	362,963	24,692
1915	166,202	12,279
1916	108,275	10,589
1917	54,834	7,852
1918	9,506	1,407
1919	.....	.....
1920	62,534	6,147
1921	99,340	10,987
1922	66,727	5,901

Imports Into the United States

Orchil, or Orchil Liquid

	Pounds.	Dollars.
1871	.....	3,942
1881	.....	.....
1891	.....	81,974
1901	.....	31,937
1913	.....	27,386
1914	.....	21,569
1915	.....	37,802
1916	.....	114,603
1917	.....	98,905
1918	.....	55,612
1919	259,124	30,651
1920	634,570	63,380
1921	520,275	77,409
1922	424,398	56,030

Quantity not stated prior to 1919.

Orris, or Iris, Root

	Pounds.	Dollars.
1881	108,132	11,199
1891	230,448	25,376
1901	301,220	15,605
1913	357,963	37,326
1914	580,484	71,941
1915	554,125	52,893
1916	602,289	62,552
1917	527,539	61,494
1918	465,960	55,728
1919	406,373	68,956
1920	1,334,928	146,921
1921	235,522	17,602
1922	559,352	25,725

Osmiridium

	Ounces, troy.	Dollars.
1914	666	43,659
1915	911	58,014
1916	302	9,654
1917	333	24,293
1918	158	16,015
1919	809	77,347
1920	2,814	302,070
1921	3,619	365,245
1922	2,735	273,401

Not stated prior to 1914.

Osmium

	Ounces, troy.	Dollars.
1919	1,957	119,328
1920	624	29,021
1921	351	23,275
1922	608	46,153

Not stated prior to 1919.

Palladium

	Ounces, troy.	Dollars.
1901	.....	1,455
1914	5,986	169,171
1915	40	2,779
1916	8,011	304,559
1917	1,663	95,331
1918	1,317	148,938
1919	2,020	77,642
1920	6,518	599,471
1921	5,817	424,472
1922	12,165	639,976

Palm and Palm Nut Kernels

	Pounds.	Dollars.
1881	.....	819
1891	.....	1,273
1901	.....	.....
1913	.....	4,872
1914	.....	23,127
1915	.....	31,900
1916	.....	1,104,885
1917	.....	626,435
1918	.....	338,778
1919	19,590,551	339,708
1920	6,758,218	420,949
1921	4,545,057	217,080
1922	302,776	20,106

Quantity not stated prior to 1919.

Paraffin and Paraffin Wax

(Not including oil.)

	Pounds.	Dollars.
1891	62,439	4,880
1901	263,251	13,484
1913	11,521,205	503,802
1914	7,501,463	327,402
1915	5,628,811	254,389
1916	8,526,929	418,362
1917	10,641,404	654,186
1918	8,881,023	656,474
1919	6,600,404	754,351
1920	8,687,728	820,299
1921	5,714,653	630,575
1922	5,654,930	230,862

Paris Green and London Purple

	Pounds.	Dollars.
1901	311,753	6,229
1913	165,820	7,692
1914	33,373	3,572
1915	16,800	2,975
1916	31,917	8,163
1917	.....	.....
1918	48	189
1919	18	14
1920	.....	.....
1921	992	372
1922	1,787	316

Peanuts, Unshelled

	Pounds.	Dollars.
1871	5,139,877	128,318
1881	40,333	724
1891	304,335	6,553
1901	738,718	18,762
1913	12,140,612	459,003
1914	17,308,778	655,448
1915	15,075,387	480,693
1916	9,623,411	353,790
1917	7,710,082	330,769
1918	3,096,678	152,313
1919	1,304,409	92,291
1920	9,786,996	792,034
1921	5,968,952	466,224
1922	2,584,829	139,223

Peanuts, Shelled

	Pounds.	Dollars.
1871	720,982	25,560
1881	5,751	432
1891	148,350	18,313
1901	55,621	1,938
1913	7,823,173	428,188
1914	21,819,101	987,499
1915	11,696,507	445,143
1916	19,739,888	740,276
1917	27,548,928	1,200,508
1918	70,947,036	4,358,197
1919	15,855,266	1,086,115
1920	102,285,543	9,534,498
1921	56,137,230	3,543,412
1922	5,748,982	259,432

Pearl Hardening for Paper Makers' Use

		Dollars.
1901	.....	2,165
1913	.....	8,612
1914	.....	5,294
1915	.....	3,669
1916	.....	593
1917	.....	183
1918	.....	30
1919	.....	420
1920	.....	143
1921	.....	222
1922	.....	.....

Pepper, Black or White, Unground

	Pounds.	Dollars.
1871	6,895,551	485,635
1881	8,661,633	741,119
1891	13,871,442	1,372,818
1901	15,022,896	1,752,167
1913	27,568,317	2,855,184
1914	21,809,875	2,179,995
1915	26,620,992	2,685,522
1916	32,174,546	3,789,466
1917	26,586,256	4,035,410
1918	32,132,953	4,928,582
1919	22,493,585	3,590,072
1920	27,736,965	4,693,669
1921	24,593,628	2,819,661
1922	25,855,519	2,532,304

Pepper, Capsicum, Red or Cayenne, Unground

	Pounds.	Dollars.
1871	140,936	9,241
1881	66,854	8,414
1891	2,302,326	123,092
1901	2,038,797	143,137
1914	6,522,463	711,966
1915	3,093,232	332,616
1916	4,354,041	477,044
1917	4,734,381	47,343
1918	2,712,857	315,481
1919	1,950,920	226,294
1920	2,758,607	379,228
1921	2,683,311	391,199
1922	2,389,769	315,333

Pepper, Capsicum, Red or Cayenne, Ground.

	Pounds.	Dollars.
1871	1,376	603
1881	25,353	3,829
1891	.....	.....
1901	.....	.....
1914	1,322,308	165,807
1915	1,827,666	207,379
1916	2,265,154	271,244
1917	3,636,876	455,897
1918	1,891,744	280,071
1919	2,112,371	626,188
1920	2,399,677	941,418
1921	2,537,883	624,078
1922	3,211,432	471,426

Perfumery, Including Cologne and Other Toilet Waters, Containing Alcohol Etc.

	Pounds.	Dollars.
1871	.....	272,302
1881	.....	461,592
1891	.....	258,832
1901	.....	594,282
1913	286,025	819,685
1914	301,443	771,758
1915	240,075	689,930
1916	281,387	828,727
1917	359,200	1,085,369
1918	267,733	1,014,647
1919	221,041	911,014
1920	1,620,601	3,533,172
1921	1,774,025	3,639,951
1922	566,365	2,339,280

Perfumery, Including Cologne and Other Toilet Waters, Not Containing Alcohol

	Pounds.	Dollars.
1922	1,556,411	2,149,714

Not stated prior to 1922.

Persian Berry Extracts for Dyeing.

	Pounds.	Dollars.
1881	.....	.....
1891	.....	1,702
1901	.....	511
1913	64,883	7,173
1914	115,336	12,924
1915	92,876	12,245
1916	17,353	4,227
1917	8,507	1,837
1918	.....	.....
1919	.....	.....
1920	17,166	6,322
1921	.....	.....
1922	21,217	4,042

Phenolic Resin (Synthetic).

	Pounds.	Dollars.
1917	134,690	11,339
1918	12	257
1919	69	2,238
1920	2,575	1,571
1921	1,607	2,698
1922	1,016	1,868

Not stated prior to 1917.

Phenolphthalein.

	Pounds.	Dollars.
1914	14,076	14,090
1915	49,326	46,295
1916	11,432	9,740
1917	3,576	7,794
1918	.....	.....
1919	100	1,200
1920	200	726
1921	.....	.....
1922	5,120	2,421

Not stated prior to 1914.

Phenylenediamine.

	Pounds.	Dollars.
1919	2,246	1,225
1920	2,029	2,431
1921	.....	.....
1922	.....	.....

Not stated prior to 1919.

Phosphates, Crude.

	Tons.	Dollars.
1871	.....	165,703
1881	.....	918,835
1891	32,883	287,057
1901	23,535	152,780
1914	23,551	177,338
1915	2,001	26,982
1916	8,190	69,320
1917	96	1,420
1918	6	60
1919	32	323
1920	54	1,681
1921	541	9,725
1922	3,945	63,150

Phosphorus.

	Pounds.	Dollars.
1871	.....	32,872
1881	.....	52,113
1891	151,166	53,590
1901	38,315	15,125
1914	605	264
1915	612	251
1916	.....	.....
1917	4,010	2,306
1918	88,692	57,572
1919	564,043	205,507
1920	99,806	23,462
1921	361,332	70,644
1922	648,135	86,884

Photographic Chemicals (Coal Tar).

	Pounds.	Dollars.
1917	11,322	103,580
1918	11,492	80,803
1919	14,261	99,318
1920	15,477	72,109
1921	30,727	80,632
1922	11,650	25,917

Not stated prior to 1917.

Pimento (Allspice), Unground.

	Pounds.	Dollars.
1871	1,386,542	55,289
1881	1,774,344	159,960
1891	1,195,270	49,326
1901	4,254,196	208,703
1913	7,212,109	259,508
1914	1,517,971	54,506
1915	1,330,158	36,769
1916	1,355,576	46,241
1917	3,277,578	118,401
1918	4,064,556	182,847
1919	1,193,629	54,677
1920	4,064,481	314,583
1921	3,325,870	176,718
1922	4,345,769	131,117

Pitch, Burgundy.

	Pounds.	Dollars.
1881	58,285	1,554
1891	212,627	3,520
1901	171,771	3,650
1913	977,629	43,790
1914	1,055,327	40,480
1915	131,967	4,051
1916	14,756	673
1917	25	3
1918	100	12
1919	.....	.....
1920	.....	.....
1921	3,776	476
1922	47,191	6,532

Pitch, Marine Glue.

	Pounds.	Dollars.
1913	303,186	14,392
1914	317,506	15,154
1915	56,532	3,807
1916	481,633	20,496
1917	327,311	18,447
1918	276,702	18,860
1919	164,348	11,287
1920	173,336	11,194
1921	230,177	15,188
1922	89,975	9,431

Plaster Rock, or Gypsum, Crude.

	Tons.	Dollars.
1871	112,900	88,256
1881	144,682	128,107
1891	167,606	176,588
1901	197,144	213,317
1913	386,927	462,889
1914	417,580	482,320
1915	260,161	316,308
1916	306,757	372,908
1917	230,392	276,952
1918	141,106	176,959
1919	69,538	92,548
1920	191,913	282,601
1921	234,719	359,027
1922	295,593	454,192

Plaster Rock, or Gypsum, Ground or Calcined.

	Tons.	Dollars.
1871	.....	64,465
1881	.....	24,915
1891	9,243	86,809
1901	2,520	15,606
1913	3,910	26,228
1914	4,292	30,225
1915	3,943	30,333
1916	6,494	36,322
1917	12,321	107,999
1918	11,828	79,335
1919	7,416	106,131
1920	7,536	110,353
1921	11,954	151,752
1922	3,617	51,591

Plasters, Healing, or Curative, and Court Plaster.

	Dollars.
1901	6,911
1913	4,639
1914	10,929
1915	7,171
1916	8,094
1917	7,571
1918	5,531
1919	7,278
1920	9,244
1921	12,595
1922	6,972

Platinum Vases, Retorts and Other Apparatus for Chemical Uses.

	Ounces, Troy	Dollars.
1891	.....	26,228
1901	.....	24,252
1913	.....	93,062
1914	.....	82,000
1915	.....	33,478
1916	.....	50,845
1917	.....	17,521
1918	.....	2,530
1919	12	1,314
1920	458	47,252
1921	384	38,773
1922	21	2,953

Plumbago or Graphite.

	Tons.	Dollars.
1871	2,904	136,200
1881	8,489	381,966
1891	10,126	509,719
1901	13,110	930,002
1913	25,233	1,972,177
1914	24,866	1,846,074
1915	17,057	1,387,873
1916	30,938	4,298,530
1917	42,270	9,678,160
1918	25,440	6,018,602
1919	18,670	2,222,519
1920	20,924	2,346,302
1921	14,797	1,160,054
1922	6,279	345,815

Polishing and Cleaning Creams, Except Blanco Polish

		Dollars.
1891	.....	42,971
1901	.....	.....
1914	.....	6,085
1915	.....	11,600
1916	.....	14,133
1917	.....	7,208
1918	.....	22,879
1919	.....	18,402
1920	.....	15,082
1921	.....	26,235
1922	.....	11,845

Potash, Bicarbonate of, Refined.

	Pounds.	Dollars.
1871	170,823	10,550
1881	798,585	39,214
1891	76,828	4,344
1901	73,770	5,054
1913	311,645	14,295
1914	478,853	22,767
1915	383,534	20,341
1916	2,062	614
1918	171,528	84,381
1919	87,946	25,119
1920	5,008	1,200
1917	10,053	5,271
1921	594,287	116,495
1922	381,605	19,898

Potash, Bichromate and Chromate of.

	Pounds.	Dollars.
1871	2,170,473	223,529
1881	4,404,237	402,088
1891	1,234,085	95,261
1901	200,519	14,401
1913	27,871	2,601
1914	34,860	2,822
1915	40,227	3,317
1916	2,291	391
1917	2,404	962
1918	20	8
1919	.....	.....
1920	19,864	6,961
1921	331	89
1922	74,850	7,052

Potash, Carbonate of, Crude.

	Pounds.	Dollars.
1901	18,888,612	627,601
1913	10,063,912	295,066
1914	9,046,302	240,451
1915	8,620,504	291,341
1916	444,241	27,689
1917	1,069,408	185,910
1918	9,183,741	2,928,288
1919	1,092,792	373,745
1920	15,916,283	301,541
1921	3,515,339	369,699
1922	4,097,490	176,742

Potash, Carbonate of, Refined.

	Pounds.	Dollars.
1891	7,241,999	259,537
1901	3,448,349	112,783
1913	14,035,111	412,587
1914	10,421,005	368,958
1915	2,377,940	92,959
1916	174,587	38,604
1917	202,385	53,170
1918	445,282	124,019
1919	130,040	40,980
1920	1,318,531	144,407
1921	577,275	162,255
1922	266,527	16,455

Potash, Caustic or Hydrate of, Unrefined.

	Pounds.	Dollars.
1901	3,840,777	180,277
1912	8,422,007	330,684
1913	8,994,449	348,501
1914	8,565,451	326,650

Included in "Potash, Hydrate of, etc.," after 1914.

Potash, Caustic or Hydrate of, Refined.

	Pounds.	Dollars.
1901	86,798	7,195
1912	77,184	8,097
1913	112,822	11,920
1914	18,751	1,977

Included in "Potash, Hydrate of., etc.," after 1914.

Potash, Chlorate of.

	Pounds.	Dollars.
1871	395,068	85,315
1881	1,086,781	150,444
1891	3,361,838	341,661
1901	1,103,379	67,383
1913	1,235,732	66,609
1914	40,319	3,408
1915	27,419	4,614
1916	.....	.....
1917	437,339	104,008
1918	1,029,980	610,702
1919	315,565	113,498
1920	698,385	87,205
1921	2,060,124	179,563
1922	8,806,221	327,539

Potash, Crude, or Black Salts.

	Pounds.	Dollars.
1881	.....	1,227
1891	.....	.....
1901	.....	.....
1914	2,599,883	52,454
1915	4,076,783	83,502
1916	1,504,149	53,752
1917	2,819,235	235,111
1918	727,588	112,235
1919	268,441	12,814
1920	4,912,740	144,317
1921	10,681,304	309,030
1922	3,642,249	84,884

Not stated prior to 1914.

Potash, Cyanide of.

	Pounds.	Dollars.
1901	2,029,993	475,833
1913	950,890	187,525
1914	1,236,799	183,259
1915	747,627	143,331
1916	43,705	9,311
1917	70,147	49,513
1918	13,455	3,150
1919	444,581	32,161
1920	5,175,608	430,873
1921	13,353,271	977,664
1922	2,007,752	175,019

Potash, Hydrate of, Containing Not More Than 15 Per Cent. of Caustic Soda.

	Pounds.	Dollars.
1891	1,891,607	85,535
1901	.....	.....
1915	4,903,471	225,002
1916	39,770	9,222
1917	74,780	33,648
1918	11,732	4,398
1919	466,620	124,563
1920	782,477	220,163
1921	4,934,697	474,479
1922	15,079,586	685,716

See "Potash, Caustic, Etc."

Potash, Muriate of.

	Tons.	Dollars.
1871	.....	61,270
1881	11,401	335,799
1891	37,927	1,182,007
1901	69,281	2,083,641
1913	223,887	6,737,757
1914	234,856	7,925,781
1915	102,882	3,660,353
1916	2,126	460,588
1917	606	174,806
1918	596	166,979
1919	1,677	201,307
1920	110,324	11,038,173
1921	49,911	5,290,196
1922	13' 423	5,549,580

Imports Into the United States

Potash, Nitrate of, Crude.
(See Saltpeter, Crude.)

Potash, Nitrate of, Refined.

	Tons.	Dollars.
1871	67	7,820
1881	162	19,535
1891	79	6,194
1901	216	18,433
1913	197	22,142
1914	166	20,173
1915	34	4,222
1916	2	749
1917	288	35,143
1918	43	16,193
1919	1	96
1920	103	20,658
1921	14,444	107,648
1922	683	48,558

Potash, Permanganate of.

	Pounds.	Dollars.
1871	2,735,769	112,521
1881	.....	.....
1891	.....	.....
1901	.....	.....
1913	357,366	25,314
1914	1,351,855	91,065
1915	1,039,304	78,924
1916	214,291	57,306
1917	6,946	11,727
1918	43,826	106,104
1919	18,107	43,830
1920	9,446	5,100
1921	104,041	47,984
1922	856,067	109,085

Potash, Prussiate of, Red.

	Pounds.	Dollars.
1871	17,480	7,222
1881	106,424	49,685
1891	35,826	10,650
1901	30,262	7,357
1913	65,316	11,302
1914	89,976	15,325
1915	83,574	14,922
1916	2,560	3,520
1917	4,523	10,425
1918	9,824	18,496
1919	13,992	25,497
1920	87,506	52,483
1921	66,004	30,232
1922	39,716	15,121

Potash, Prussiate of, Yellow.

	Pounds.	Dollars.
1871	255,325	58,009
1881	544,167	108,954
1891	2,223,154	368,366
1901	1,609,358	218,908
1913	2,812,408	309,302
1914	3,508,228	390,021
1915	2,316,736	255,711
1916	44,156	31,651
1917	41,128	32,251
1918	134,638	111,096
1919	58,003	45,869
1920	1,141,224	188,797
1921	398,961	99,211
1922	515,633	109,228

Potash, Sulphate of.

	Tons.	Dollars.
1891	1,362	49,619
1901	15,632	558,136
1913	48,023	1,798,369
1914	44,986	1,887,491
1915	21,705	1,071,623
1916	2,427	197,808
1917	656	20,538
1918	136	10,837
1919	137	23,304
1920	6,356	1,073,322
1921	12,081	1,660,798
1922	45,280	2,085,348

Potassium, Iodide.

	Pounds.	Dollars.
1871	17,842	49,503
1881	480	1,267
1891	1,024	935
1901	663	1,328
1913	120	239
1914	270	491
1915	4	13
1916	309	1,032
1917	24,357	58,752
1918	65,992	133,611
1919	25,963	74,834
1920	11,377	34,766
1921	890	2,435
1922	.....	.....

Potassium, Metal

	Pounds.	Dollars.
1921	15,227	581
1922	42,869	3,643

Not stated prior to 1921.

Press Cloth for Oil Milling Purposes

	Pounds.	Dollars.
1920	8,502	9,225
1921	11,582	13,643
1922	8,401	6,559

Not stated prior to 1920.

Putty (Whiting and Paris White), Ground in Oil.

	Pounds.	Dollars.
1871	5,534	118
1881	287	28
1891	122	14
1901	15,362	378
1913	36,434	881
1914	37,020	911
1915	18,078	343
1916	16,082	386
1917	33,286	1,472
1918	36,398	3,781
1919	4,735	811
1920	96,572	4,717
1921	393,136	12,420
1922	744,495	13,947

Pyrethrum or Insecticide Flowers.

	Pounds.	Dollars.
1918	2,298,476	422,751
1919	3,399,026	667,374
1920	6,827,700	2,672,576
1921	3,958,657	1,749,213
1922	2,600,093	789,988

Not stated prior to 1918.

Pyridine and Quinoline.

	Pounds.	Dollars.
1918	11,981	1,051
1919	123,049	15,248
1920	493,383	56,604
1921	434,668	121,437
1922	148,911	22,075

Not stated prior to 1918.

Pyroxylin Compounds, or Other Cellulose Esters

	Pounds.	Dollars.
1881	.....	2
1891	.....	11,785
1901	.....	725
1913	.....	288,639
1914	.....	583,391
1915	.....	371,714
1916	.....	127,627
1917	.....	53,693
1918	.....	53,054
1919	.....	43,172
1920	.....	77,673
1921	.....	153,536
1922	84,442	36,069

Quantity not stated prior to 1922.

Quebracho Extract.

	Pounds.	Dollars.
1913	63,604,814	1,672,314
1914	99,605,839	2,699,104
1915	125,565,857	3,676,749
1916	81,501,892	5,432,458
1917	61,977,849	5,382,433
1918	101,523,282	4,917,212
1919	137,151,143	5,856,803
1920	154,944,717	8,123,641
1921	110,184,308	6,602,449
1922	134,274,423	5,205,641

Quebracho Wood.

	Tons.	Dollars.
1913	101,869	1,300,126
1914	73,957	900,880
1915	54,715	750,873
1916	106,864	1,598,465
1917	95,211	1,086,946
1918	53,871	848,671
1919	2,689	31,048
1920	33,672	480,503
1921	32,901	531,566
1922	23,987	265,910

Quicksilver.

	Pounds.	Dollars.
1871	239,223	107,646
1881	138,517	57,733
1891	457,056	254,837
1901	1,666	899
1913	380	387
1914	444,673	192,009
1915	561,924	292,244
1916	554,852	595,057
1917	242,526	239,401
1918	580,460	641,316
1919	319,974	338,595
1920	1,227,582	1,184,374
1921	728,105	616,517
1922	986,956	502,824

Quinia, Sulphate of.

	Ounces.	Dollars.
1871	10,861	12,261
1881	408,851	1,052,228
1891	3,079,660	895,729
1901	3,495,996	1,078,472
1913	2,279,734	397,409
1914	2,224,765	486,641
1915	1,508,931	378,511
1916	1,409,228	1,022,821
1917	623,947	324,438
1918	1,256,172	593,019
1919	2,101,006	1,238,125
1920	2,888,550	1,376,514
1921	1,935,531	1,489,166
1922	1,008,609	594,178

Radium, and Salts of, and Radioactive Substances.

	Grains.	Dollars.
1914	.....	29,983
1915	.....	29,983
1916	.....	3,712
1917	.....	50
1918	.....	.....
1919	11	892
1920	12	11,033
1921	807	3,027
1922	913	15,719

Not stated prior to 1914; quantity not stated prior to 1919.

Red Lead.

	Pounds.	Dollars.
1871	1,295,616	78,411
1881	212,423	10,009
1891	519,613	20,950
1901	524,935	23,933
1913	145,478	7,223
*1914	69,867	5,674
1915	6,697	342
1916	196	43
1917	20,471	5,296
1918	5	1
1919	7,184	1,134
1920	345	73
1921	22,772	1,720
1922	12,715	729

* 29,940 pounds, $3,681, came in free of duty for construction and equipment of vessels.

Rennets, Raw or Prepared.

	Pounds.	Dollars.
1871	.....	254
1881	.....	34,261
1891	.....	90,042
1901	.....	90,812
1913	.....	129,588
1914	.....	129,720
1915	.....	106,614
1916	.....	86,694
1917	.....	13,154
1918	.....	62,173
1919	40,905	97,964
1920	185,652	159,039
1921	122,968	72,092
1922	186,939	81,351

Quantity not stated prior to 1919.

Resorcin

	Pounds.	Dollars.
1920	5,159	2,642
1921	156,028	112,312
1922	.....	.....

Not stated prior to 1920.

Rhubarb Root.

	Pounds.	Dollars.
1881	163,519	42,607
1891	90,592	18,400
1901	216,803	20,766
1913	121,701	16,554
1914	181,240	22,354
1915	233,099	24,592
1916	155,924	17,701
1917	238,601	32,084
1918	190,962	20,879
1919	119,245	46,903
1920	283,138	234,757
1921	109,626	64,997
1922	125,212	44,088

Rochelle Salts. See "Tartrate of Soda"

Rose Leaves.

	Pounds.	Dollars.
1891	.....	6,966
1901	.....	1,678
1913	.....	67
1914	.....	1,434
1915	.....	484
1916	.....	1,060
1917	.....	4,199
1918	.....	4,164
1919	1,399	557
1920	25,027	10,566
1921	9,536	4,153
1922	7,255	2,686

Quantity not stated prior to 1919.

Rosin, Violin.

		Dollars.
1871	.....	460
1881	.....	4,636
1891	.....	136
1901	.....	3,470
1913	.....	30,621
1914	.....	11,625
1915	.....	6,532
1916	.....	4,893
1917	.....	2,872
1918	.....	3,746
1919	.....	2,292
1920	.....	6,506
1921	.....	7,300
1922	.....	8,021

Saccharin.

	Pounds.	Dollars.
1901	29,334	35,734
1913	47	64
1914	8	30
1915	5,617	6,737
1916	12,954	76,789
1917	1,596	18,276
1918	1	48
1919	.....	.....
1920	.....	.....
1921	40	39
1922	46	118

Saffron, Safflower, and Extract of, and Saffron Cake, Not Containing Alcohol.

	Pounds.	Dollars.
1871	.....	294
1881	.....	54,320
1891	.....	44,339
1901	.....	42,302
1913	.....	93,149
1914	.....	85,678
1915	.....	70,132
1916	.....	111,420
1917	.....	124,235
1918	.....	54,109
1919	16,459	77,273
1920	25,704	138,732
1921	22,969	67,454
1922	20,273	88,584

Quantity not stated prior to 1919.

Sage, Unground.

	Pounds.	Dollars.
1913	1,299,120	19,893
1914	2,005,469	39,369
1915	822,083	48,454
1916	1,865,815	130,464
1917	1,528,828	92,409
1918	1,304,295	150,004
1919	977,440	143,257
1920	1,418,414	159,878
1921	2,270,304	174,773
1922	1,562,480	66,391

Sago, Crude, and Sago Flour.

	Pounds.	Dollars.
1871	1,719,256	45,691
1881	1,247,219	38,845
1891	3,970,504	101,303
1901	51,991	1,588
1913	12,389,192	230,992
1914	9,970,717	160,924
1915	6,630,400	106,090
1916	10,999,587	234,073
1917	7,893,055	204,864
1918	22,179,761	654,261
1919	3,092,967	104,915
1920	6,115,486	332,327
1921	2,591,377	86,583
1922	5,868,879	132,454

Salep or Salop.

	Pounds.	Dollars.
1913	.....	44
1914	.....	75
1915	.....	2,762
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	37	29
1922	112	88

Salicin.

	Pounds.	Dollars.
1881	.....	6,410
1891	4,987	6,428
1901	4,506	14,935
1913	3,274	12,146
1914	4,129	14,982
1915	1,800	6,560
1916	453	2,135
1917	390	2,307
1918	319	2,845
1919	560	5,791
1920	1,374	16,379
1921	1,843	19,771
1922	2,000	7,770

Salol.

	Pounds.	Dollars.
1914	660	219
1915	23,430	11,445
1916	4,069	2,182
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	.....	.....

Not stated prior to 1914.

Salt.

	100 pounds.	Dollars.
1912	2,901,815	379,540
1913	2,508,561	356,911
1914	3,397,496	456,426

Stated separately after 1914; see following classes.

Salt in Bags, Barrels or Other Packages.

	100 pounds.	Dollars.
1871	2,839,938	800,454
1881	4,124,422	1,242,543
1891	1,736,861	584,845
1901	1,114,571	372,482
1913	620,402	213,676
1916	572,616	195,791
1917	375,658	170,784
1918	268,426	158,832
1919	117,690	107,941
1920	1,463,794	280,684
1921	643,076	264,852
1922	784,226	322,153

Salt in Bulk.

	100 pounds.	Dollars.
1871	2,747,351	355,318
1881	5,293,610	658,068
1891	2,504,581	258,270
1901	1,920,837	187,681
1915	1,959,638	172,888
1916	1,591,032	134,975
1917	1,808,867	158,096
1918	755,044	145,640
1919	577,416	99,988
1920	292,446	174,364
1921	1,843,017	365,190
1922	1,817,399	285,538

Salt Cake

	Tons.	Dollars.
1871	.....	2,436
1881	698	8,187
1891	8,457	85,368
1901	3,412	34,645
1913	189	4,771
1914	206	2,436
1915	189	3,566
1916	91	6,392
1917	216	4,122
1918	463	8,362
1919	28	168
1920	.....	.....
1921	152	2,855
1922	189	5,994

Saltpeter, Crude.

	Pounds.	Dollars.
1871	5,072,381	208,423
1881	11,014,226	414,630
1891	16,090,486	494,121
1901	41,343,897	473,578
1913	10,989,382	288,995
1914	3,547,252	115,470
1915	677,785	22,483
1916	5,412,130	734,123
1917	10,171,654	904,506
1918	8,715,327	956,853
1919	34,557,048	1,208,391
1920	20,862,012	929,045
1921	30,868,786	1,407,044
1922	6,208,779	189,569

Santonin, and Its Combination with Acids

	Pounds.	Dollars.
1871	983	6,035
1881	483	2,317
1891	5	7
1901	6,584	11,984
1913	1,982	44,358
1914	5,230	125,128
1915	912	25,568
1916	20,925	586,850
1917	111	3,966
1918	223	7,502
1919	1,125	40,688
1920	2,778	162,335
1921	6,613	236,864
1922	7,960	959,153

Saponin.

		Dollars.
1914	.....	6,643
1915	.....	5,967
1916	.....	413
1917	.....	.....
1918	.....	.....
1919	.....	.....
1921	.....	2,480
1922	.....	6,628

Not stated prior to 1914.

Sarsaparilla Root.

	Pounds.	Dollars.
1871	242,314	46,067
1881	270,920	63,641
1891	631,985	90,694
1901	675,928	55,790
1913	301,308	38,360
1914	224,970	36,284
1915	250,178	36,055
1916	291,276	41,489
1917	146,047	18,994
1918	110,709	31,454
1919	221,946	58,126
1920	280,175	90,291
1921	128,043	38,346
1922	179,388	46,584

Seed, Anise

	Pounds.	Dollars.
1871	93,847	8,625
1881	367,186	29,386
1891	300,880	19,348
1901	391,659	20,356
1913	1,250,831	84,941
1914	231,117	15,412
1915	432,863	30,932
1916	789,487	68,713
1917	475,100	67,221
1918	364,406	61,330
1919	261,837	34,610
1920	658,425	115,356
1921	292,620	39,275
1922	441,085	46,913

Seed, Canary

	Pounds.	Dollars.
1871	2,226,560	56,952
1881	3,037,620	86,838
1891	7,711,060	122,671
1901	3,731,800	67,791
1913	6,219,623	184,596
1914	4,503,280	190,530
1915	4,911,298	208,835
1916	5,368,551	181,898
1917	4,909,107	166,774
1918	3,242,223	201,469
1919	3,953,049	406,883
1920	7,084,523	538,554
1921	5,596,315	255,175
1922	8,255,957	254,394

Seed, Caraway

	Pounds.	Dollars.
1871	.....	113,387
*1881	1,801,860	49,542
1891	1,606,501	53,808
1901	1,281,382	77,273
1913	3,691,831	234,294
1914	1,909,300	107,599
1915	2,895,418	172,742
1916	2,978,581	280,146
1917	505,804	71,745
1918	635,677	247,499
1919	579,599	204,493
1920	2,475,082	315,846
1921	2,443,550	154,389
1922	3,707,392	203,568

* Includes "Coriander."

Seed, Castor—See "Castor Beans"

Seed, Cardamom

	Pounds.	Dollars.
1871	5,557	13,932
1881	42,456	66,079
1891	41,399	21,945
1901	60,252	32,305
1913	113,461	104,287
1914	80,782	72,148
1915	152,679	106,180
1916	225,687	119,162
1917	214,464	88,605
1918	253,328	108,505
1919	139,808	79,114
1920	210,871	107,507
1921	190,312	101,581
1922	245,815	77,487

Seed, Coriander

	Pounds.	Dollars.
1871	45,189	2,574
*1881	.....	.....
1891	.....	.....
1901	655,382	17,092
1913	1,324,735	35,817
1914	1,238,430	46,158
1915	1,496,288	36,851
1916	1,587,923	54,870
1917	1,111,127	124,098
1918	1,829,183	235,279
1919	2,325,578	215,858
1920	2,179,989	94,996
1921	472,239	13,643
1922	1,986,314	77,314

* Included in "Caraway."

Imports Into the United States

Seed, Cotton

	Pounds.	Dollars.
1901	1,979,718	7,200
1914	8,891,303	66,035
1915	22,724,868	114,983
1916	30,113,684	251,568
1917	53,362,927	932,335
1918	35,435,460	1,047,657
1919	62,965,821	1,308,493
1920	59,906,675	1,687,974
1921	89,458,235	649,138
1922	59,937,765	518,406

Seed, Cummin

	Pounds.	Dollars.
1871	1,065	180
*1881	.....	.....
*1891	496,723	12,087
*1901	1,090,261	22,744
1913	529,607	27,178
1914	530,550	31,709
1915	694,344	83,534
1916	1,446,006	225,672
1917	1,159,598	207,012
1918	1,520,691	198,855
1919	971,982	117,217
1920	1,836,564	167,292
1921	788,493	49,812
1922	1,126,887	103,796

* Includes "Fenugreek."

Seed, Fennel

	Pounds.	Dollars.
1871	6,643	562
1881	150,062	9,313
1891	.....	.....
1901	107,523	6,918
1913	187,665	14,410
1914	207,135	12,299
1915	293,810	13,622
1916	312,927	20,751
1917	443,704	48,497
1918	218,091	24,133
1919	160,584	20,412
1920	282,522	34,965
1921	143,594	17,468
1922	222,650	18,479

Seed, Fenugreek

	Pounds.	Dollars.
1871	16,457	571
1913	1,944,407	37,434
1914	1,619,230	29,601
1915	1,434,826	30,295
1916	811,270	20,672
1917	1,052,843	71,102
1918	851,532	80,504
1919	1,673,229	131,996
1920	1,043,036	44,169
1921	746,386	17,995
1922	207,192	4,932

Seed, Flaxseed or Linseed

	Bushels.	Dollars.
1871	4,113,586	5,977,926
1881	4,787,466	1,120,370
1891	1,479,239	1,629,901
1901	1,533,997	1,965,913
1913	5,274,922	8,118,319
1914	8,652,022	10,571,656
1915	10,373,902	12,983,548
1916	14,637,543	20,151,633
1917	12,484,859	25,295,231
1918	12,785,034	33,830,735
1919	8,433,426	22,643,803
1920	23,367,328	76,741,019
1921	16,168,523	30,132,988
1922	13,630,598	26,018,266

Seed, Flaxseed Screenings

	Pounds.	Dollars
1914	.....	4,748
1915	.....	673
1916	.....	4,506
1917	.....	2,052
1918	.....	37,818
1919	13,970,091	84,207
1920	31,055,762	183,710
1921	25,903,195	105,630
1922	18,320,345	46,247

Not separately stated prior to 1914, quantity not stated prior to 1919.

Seed, Hemp

	Pounds.	Dollars.
1871	857,396	28,224
1881	1,324,355	26,403
1891	3,558,146	73,409
1901	1,769,375	36,336
1913	2,347,979	44,483
1914	2,031,438	38,315
1915	2,591,026	39,992
1916	4,036,614	63,163
1917	5,355,921	110,176
1918	449,772	12,232
1919	760,353	26,395
1920	5,194,599	264,652
1921	3,763,970	82,245
1922	2,925,317	63,566

Seed, Millet, Prepared

	Pounds.	Dollars.
1901	.....	3,814
1913	.....	16,977
1914	.....	26,680
1915	.....	1,790
1916	.....	249
1917	.....	.....
1918	.....	.....
1919	3,075	391
1920	9,080	190
1921	5,376	794
1922	59,236	323

Quantity not stated prior to 1919.

Seed, Mustard

	Pounds.	Dollars.
1871	1,608,270	103,192
1881	1,157,832	63,240
1891	2,871,660	92,052
1901	4,489,206	159,993
1913	12,719,682	417,370
1914	11,543,941	370,964
1915	10,157,934	543,586
1916	16,402,112	1,070,567
1917	9,962,122	776,546
1918	13,035,827	683,096
1919	11,272,770	842,033
1920	14,817,829	1,510,783
1921	4,618,253	253,903
1922	12,490,026	487,569

Seed, Oilseed, Not Elsewhere Specified

	Bushels.	Dollars.
1901	174,635	237,856
1913	13,519	33,289
1914	79,097	104,072
1915	13,547	28,752
1916	18,958	39,359
1917	30,939	76,948
1918	309,687	755,746
1919	13,856	46,038
1920	40,863	169,900
1921	133,451	477,973
1922	300,308	559,569

Seed, Pepper

	Pounds.	Dollars.
1913	10,414	4,579
1914	11,536	4,879
1915	15,324	6,379
1916	14,900	6,202
1917	4,962	2,846
1918	21,884	15,964
1919	7,022	11,042
1920	1,997	2,159
1921	5,376	4,301
1922	7,275	5,527

Seed, Poppy

	Bushels.	Dollars.
1891	5,323	13,108
1901	22,686	37,440
1913	77,396	237,069
1914	56,322	126,744
1915	52,899	172,018
1916	26,648	176,776
1917	3,878	25,565
1918	130,024	215,840
1919	11,320	29,206
1920	33,745	363,369
1921	86,096	476,246
1922	94,637	388,644

Seed, Rape

	Pounds.	Dollars.
1871	145,323	6,450
1881	531,412	19,986
1891	891,441	19,681
1901	1,702,504	71,527
1913	4,308,750	169,634
1914	5,970,937	211,301
1915	5,194,132	230,280
1916	9,977,353	311,212
1917	4,819,360	186,877
1918	12,673,276	741,810
1919	742,780	43,935
1920	6,905,051	456,462
1921	4,934,014	277,547
1922	5,892,308	267,330

Seed, Soya Bean

	Pounds.	Dollars.
1914	1,929,435	49,507
1915	3,837,865	87,306
1916	3,003,065	78,963
1917	5,334,334	132,572
1918	31,805,997	692,964
1919	3,203,203	145,996
1920	4,022,552	213,696
1921	4,661,458	190,674
1922	3,111,866	118,933

Not stated prior to 1914.

Selenium and Salts of

	Pounds.	Dollars.
1914	.....	363
1915	.....	43
1916	.....	16
1917	.....	302
1918	.....	2,236
1919	.....	.....
1920	114	25,866
1921	1,104	2,092
1922	1,654	2,534

Not stated prior to 1914. Quantity not stated prior to 1920.

Senna Leaves

	Pounds.	Dollars.
1891	.....	51,876
1901	.....	91,884
1913	2,634,117	159,555
1914	2,454,772	173,054
1915	2,180,288	209,313
1916	2,794,400	361,881
1917	5,116,315	844,733
1918	3,575,066	771,067
1919	2,554,069	628,852
1920	3,425,200	572,419
1921	2,780,666	349,839
1922	1,946,635	191,538

Sheep Dip

	Pounds.	Dollars.
1891	.....	893
1901	.....	59,016
1913	.....	63,527
1914	.....	16,842
1915	.....	32,963
1916	.....	21,198
1917	.....	17,185
1918	.....	26,989
1919	88,335	6,958
1920	172,562	13,880
1921	53,450	5,240
1922	10,377	1,480

Quantity not stated prior to 1919.

Sienna and Sienna Earths

	Pounds.	Dollars.
1891	1,147,282	24,070
1901	795,996	14,624
1914	6,489,329	55,925
1915	6,656,031	64,658
1916	5,266,292	83,428
1917	2,990,972	61,163
1918	2,731,181	61,301
1919	2,060,857	48,237
1920	2,555,705	76,715
1921	5,111,832	150,857
1922	2,590,299	102,534

Silver Leaf

	100 leaves.	Dollars.
1871	1,160	5,500
1881	250	919
1891	1	15
1901	30	85
1913	17,130	2,122
1914	34,070	4,353
1915	31,298	3,718
1916	6,445	802
1917	1,125	135
1918	1,750	382
1919	.....	.....
1920	3,955	1,334
1921	8,650	3,446
1922	4,412	741

Slag, Basic, Ground or Unground, for Fertilizers

	Tons.	Dollars.
1913	5,124	146,477
1914	9,509	108,565
1915	561	7,309
1916	81	1,031
1917	41	549
1918	2	54
1919	117	2,305
1920	22	689
1921	.....	.....
1922	33	938

Soap, Castile

	Pounds.	Dollars.
1901	3,842,827	245,876
1914	4,604,995	368,310
1915	4,067,921	341,107
1916	3,245,550	335,580
1917	2,390,356	306,126
1918	1,027,148	147,286
1919	955,088	143,906
1920	2,170,294	380,981
1921	2,039,498	310,015
1922	2,289,479	289,635

Soap, Medicinal

	Pounds.	Dollars.
1914	74,132	29,306
1915	32,048	14,082
1916	16,455	3,523
1917	4,287	1,975
1918	16,844	7,412
1919	9,745	8,853
1920	10,217	4,568
1921	20,338	16,193
1922	29,183	9,193

Soap, Powder

	Pounds.	Dollars.
1914	.....	211
1915	.....	3,362
1916	.....	19,568
1917	.....	7,800
1918	.....	12,744
1919	271,672	11,812
1920	27,107	2,557
1921	222,704	14,961
1922	151,319	7,688

Not stated prior to 1914.
Quantity not stated prior to 1919.

Soap, Toilet, Perfumed

	Pounds.	Dollars.
1871	.....	76,499
1881	.....	77,312
1891	.....	281,255
1901	.....	413,819
1914	.....	248,194
1915	.....	193,646
1916	.....	147,819
1917	.....	184,613
1918	.....	125,275
1919	137,301	113,996
1920	242,632	153,638
1921	363,966	227,624
1922	648,243	283,514

Quantity not stated prior to 1919.

Soap, Toilet, Unperfumed

	Pounds.	Dollars.
1871	.....	223,061
1881	.....	175,439
1891	.....	251,955
1914	.....	100,650
1915	.....	140,048
1916	.....	82,057
1917	.....	64,570
1918	.....	13,635
1919	39,151	12,110
1920	67,944	17,690
1921	85,635	18,001
1922	625,098	108,442

Quantity not stated prior to 1919.

Soap, All Other, Not Specially Provided For

	Pounds.	Dollars.
1891	.....	45,560
1901	.....	14,478
1914	.....	84,745
1915	.....	53,940
1916	.....	18,245
1917	.....	21,406
1918	.....	31,639
1919	151,526	15,038
1920	198,233	22,189
1921	341,480	36,479
1922	498,572	57,539

Quantity not stated prior to 1919.

Soda, Ash

	Pounds.	Dollars.
1871	145,428,215	2,387,583
1881	295,227,766	4,154,258
1891	326,099,239	4,122,700
1901	34,443,555	396,982
1913	3,109,790	35,461
1914	2,228,991	28,100
1915	2,127,542	29,022
1916	878,175	20,718
1917	1,047,295	29,239
1918	1,514,765	55,231
1919	.....	.....
1920	1,926,332	39,437
1921	6,630,873	93,802
1922	17,944,667	242,688

Soda, Arsenate of

	Pounds.	Dollars.
1901	74,614	2,129
1914	228,270	8,267
1915	85,850	3,188
1916	36,176	3,436
1917	23,296	2,404
1918	35	88
1919	.....	.....
1920	11,448	1,118
1921	131,915	11,946
1922	14,146	1,122

Soda, Benzoate of

	Pounds.	Dollars.
1914	190	97
1915	40,903	19,183
1916	35,188	100,195
1917	80,755	339,868
1918	1,569	4,742
1919	55,188	11,459
1920	67,397	10,478
1921	1,032	10,122
1922	11,369	3,001

Not stated prior to 1914.

Soda, Bicarbonate of

	Pounds.	Dollars.
1871	18,998,399	421,177
1881	1,951,851	58,312
1891	758,612	15,611
1901	144,182	5,006
1913	80,699	2,238
1914	88,873	2,324
1915	93,318	2,584
1916	129,414	2,867
1917	34,742	1,821
1918	29,444	944
1919	12,605	711
1920	13,353	3,514
1921	5,900	417
1922	357,216	5,627

Soda, Bichromate and Chromate of

	Pounds.	Dollars.
1901	54,105	2,781
1913	9	3
1914	11,056	585
1915	.....	.....
1916	6,154	3,630
1917	.....	.....
1918	27,127	5,259
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	86,608	6,794

Soda, Chlorate of

	Pounds.	Dollars.
1891	385,972	51,502
1901	795,659	44,173
1913	50	10
1914	469	84
1915	62	6
1916	22,176	3,105
1917	33,600	1,080
1918	44,800	8,064
1919	10	2
1920	424,280	38,973
1921	365,611	26,397
1922	1,031,351	46,910

Soda, Crystal Carbonate of

	Pounds.	Dollars.
1871	28,637,489	281,892
1881	.....	.....
1891	.....	.....
1901	611,961	5,663
1913	169,174	2,928
1914	307,488	3,323
1915	144,452	2,748
1916	49,231	889
1917	60,464	1,299
1918	70,116	2,028
1919	.....	.....
1920	203	16
1921	74,271	2,266
1922	16,042	623

Soda, Cyanide of

	Pounds.	Dollars.
1914	7,856,611	1,120,789
1915	6,187,418	955,907
1916	684,198	115,186
1917	1,875,824	861,777
1918	84,652	39,405
1919	138,970	13,406
1920	8,629,502	729,514
1921	7,733,063	1,074,434
1922	14,328,817	1,237,622

Not stated prior to 1914.

Soda, Hydrate of, or Caustic

	Pounds.	Dollars.
1871	27,952,469	877,710
1881	49,465,385	1,168,277
1891	76,788,411	1,821,127
1901	3,749,633	75,954
1913	671,480	25,364
1914	665,320	23,914
1915	444,185	19,318
1916	225,189	20,981
1917	109,983	21,052
1918	15,976	9,591
1919	2	2
1920	117,322	14,842
1921	67,950	7,766
1922	1,548,020	70,559

Soda, Hyposulphite of

	Pounds.	Dollars.
1901	5,222,369	50,639
1913	7,299	228
1914	926,135	128,828
1915	1,855,223	268,693
1916	5,125	166
1917	1,836	1,193
1918	6,960	6,723
1919	27,616	6,112
1920	11,014	7,904
1921	6,160	4,085
1922	1,717,653	32,617

Soda, Nitrate of

	Tons.	Dollars.
1871	25,145	1,254,961
1881	49,171	2,356,167
1891	104,813	2,929,760
1901	197,518	5,656,442
1913	586,315	20,713,375
1914	554,048	17,926,165
1915	575,371	16,240,510
1916	1,072,333	32,129,926
1917	1,261,993	44,428,196
1918	1,608,569	70,077,674
1919	1,410,714	68,229,548
1920	907,141	40,314,969
1921	853,756	42,322,979
1922	303,271	14,067,668

Soda, Nitrite of

	Pounds.	Dollars.
1901	90,125	4,642
1913	1,269,544	57,595
1914	1,844,379	76,813
1915	1,696,567	74,263
1916	2,593,330	170,160
1917	3,675,179	261,555
1918	2,755,033	226,294
1919	1,746,976	159,355
1920	8,897,758	978,676
1921	6,721,107	791,611
1922	1,372,768	70,813

Soda, Phosphate of

	Pounds.	Dollars.
1901	377,834	7,178
1913	30	1[illegible]
1914	1,364,789	24,975
1915	485,300	7,765
1916	1,066	79
1917	1,561	521
1918	112	69
1919	.....	.....
1920	56	22
1921	238,416	8,113
1922	1,968,739	57,345

Soda, Prussiate of, Yellow

	Pounds.	Dollars.
1913	1,887,369	118,475
1914	2,295,724	171,834
1915	1,529,958	120,477
1916	527,130	136,250
1917	175,980	96,592
1918	.....	.....
1919	274,441	99,899
1920	2,633,090	445,849
1921	1,610,036	282,966
1922	3,832,491	473,065

Soda, Sal, and Soda Crystals

	Pounds.	Dollars.
1871	28,637,489	281,892
1881	15,695,044	119,793
1891	28,548,379	252,051
1901	5,109,275	22,779
1913	128,027	1,010
1914	163,626	1,274
1915	104,800	606
1916	67,210	334
1917	50	4
1918	75	3
1919	44,800	1,156
1920	5,056	603
1921	45,360	1,399
1922	23,419	262

Soda, Silicate of

	Pounds.	Dollars.
1871	384,882	7,325
1881	557,251	8,367
1891	535,030	6,429
1901	1,229,857	10,461
1913	1,032,113	9,400
1914	1,046,569	10,881
1915	1,587,902	16,292
1916	1,567,617	18,694
1917	1,203,844	18,493
1918	707,583	12,734
1919	673,777	16,647
1920	754,923	19,479
1921	1,669,468	32,033
1922	315,902	10,135

Soda, Sulphid

	Pounds.	Dollars.
1913	951,664	13,068
1914	2,529,911	36,383
1915	1,263,366	18,228
1916	80,513	4,616
1917	344,617	7,214
1918	117,532	1,707
1919	314,887	10,494
1920	2,008,495	64,678
1921	741,965	40,440
1922	8,916,743	261,210

Soda, Sulphite of

	Pounds.	Dollars.
1913	27,152	400
1914	382,540	5,627
1915	165,594	4,316
1916	435	60
1917	68,224	1,221
1918	20,206	223
1919	11,400	1,007
1920	68,239	3,119
1921	206,423	8,369
1922	2,585,868	73,357

Sodium, Metal

	Pounds.	Dollars.
1920	5,600	694
1921	.....	.....
1922	418,997	64,976

Not stated prior to 1920.

Imports Into the United States

Sponges

		Dollars.
1871	.....	113,127
1881	.....	229,292
1891	.....	381,879
1901	.....	540,223
1912	.....	311,547
1913	.....	289,909

Stated separately after 1913.

Sponges, Not Advanced by Chemical Process

		Dollars.
1914	.....	279,211
1915	.....	334,252
1916	.....	454,626
1917	.....	593,253
1918	.....	510,374
1919	.....	475,817
1920	.....	607,440
1921	.....	459,231
1922	.....	563,092

Sponges, Bleached and Advanced by Chemical Process

		Dollars.
1914	.....	38,300
1915	.....	42,042
1916	.....	58,797
1917	.....	55,077
1918	.....	27,682
1919	.....	8,053
1920	.....	24,212
1921	.....	37,219
1922	.....	34,245

Sponges, Made of Rubber

		Dollars.
1921	.....	378
1922	.....	1,001

Not stated prior to 1921.

Starch, Potato

	Pounds.	Dollars.
1871	7,571	658
1881	35,896	2,124
1891	.....	.....
1901	.....	.....
1913	14,180,856	375,713
1914	13,934,741	233,661
1915	10,941,257	253,859
1916	2,237,717	72,736
1917	17,545,689	707,327
1918	13,195,079	902,499
1919	11,913,821	974,892
1920	9,017,574	547,672
1921	10,801,488	466,652
1922	7,156,786	319,174

Starch, Soluble or Chemically Treated

	Pounds.	Dollars.
1913	321,071	13,345
1914	1,697,392	54,604
1915	569,297	21,559
1916	7,420	417
1917	44,788	3,244
1918	.....	.....
1919	1,223	143
1920	.....	.....
1921	143,153	10,492
1922	221,259	13,713

Starch, All Other

	Pounds.	Dollars.
1871	25,078	1,806
1881	1,108,319	33,354
1891	3,743,219	86,694
1901	6,753,103	144,861
1913	677,785	40,645
1914	962,314	52,160
1915	952,934	52,537
1916	1,242,918	78,833
1917	888,345	62,132
1918	590,469	67,355
1919	224,938	35,537
1920	1,024,662	109,003
1921	474,700	54,871
1922	602,905	56,949

Straws, Drinking

		Dollars.
1914	.....	4,587
1915	.....	3,585
1916	.....	4,797
1917	.....	4,044
1918	.....	3,269
1919	.....	2,130
1920	.....	85
1921	.....	6,286
1922	.....	1,452

Not stated prior to 1914.

Strontia, Oxide of

	Pounds.	Dollars.
1891	.....	63
1901	.....	1,755
1913	.....	474
1914	.....	1,969
1915	.....	7,268
1916	.....	8,311
1917	.....	21,184
1918	.....	6,873
1919	316,640	1,358
1920	1,050,347	6,230
1921	2,816,726	16,020
1922	.....	.....

Quantity not stated prior to 1919.

Strychnia or Strychnine, and Its Combination With Acids Not Subject to Duty

	Ounces.	Dollars.
1871	5	12
1881	99	122
1891	230	175
1901	4,731	1,932
1913	966,575	4,112,057
1914	846,905	3,753,879
1915	26,967	11,449
1916	59,278	37,652
1917	33,323	25,617
1918	9,688	9,726
1919	186	362
1920	18,448	32,901
1921	29,029	45,851
1922	106,902	133,271

Sulphur Ore, as Pyrites or Sulphuret of Iron, Containing Not in Excess of 25 Per Cent. Sulphur

	Tons.	Dollars.
1891	19,605	77,694
1901	352,644	1,184,899
1913	532	377
1914	17,419	5,403
1915	26,967	11,449
1916	1,370,059	7,121,614
1917	935,749	5,855,913
1918	807,084	4,526,563
1919	370,272	2,018,447
1920	425,545	2,190,012
1921	263,633	1,299,238
1922	228,067	701,434

Sulphur or Brimstone, Crude

	Tons.	Dollars.
1871	40,699	1,212,448
1881	113,190	2,713,485
1891	119,891	2,465,732
1901	159,710	2,875,115
1913	19,258	374,024
1914	20,236	346,875
1915	25,842	442,975
1916	22,539	372,599
1917	11,819	205,980
1918	282	8,677
1919	75	1,822
1920	51	1,896
1921	3	124
1922	2	141

Sulphur Lac or Precipitated

	Pounds.	Dollars.
1881	.....	775
1891	35,535	2,395
1901	61,357	3,612
1913	715,876	13,723
1914	233,896	13,636
1915	208,568	13,187
1916	217,997	16,628
1917	69,145	7,009
1918	84,224	10,797
1919	39,548	5,897
1920	99,001	16,025
1921	49,306	13,259
1922	21,904	3,352

Sulphur, Refined

	Tons.	Dollars.
1871	104	4,328
1881	80	2,555
1891	307	6,579
1901	154	4,115
1913	1,742	41,626
1914	1,523	39,634
1915	1,296	36,275
1916	850	26,778
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	50	2,512
1921	35	2,329
1922	.....	.....

Sulphur, Sublimed, or Flowers of

	Tons.	Dollars.
1871	74	3,574
1881	110	4,226
1891	271	8,386
1901	740	20,392
1913	6,104	122,093
1914	599	15,841
1915	950	31,202
1916	200	7,512
1917	295	13,317
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	98	4,004

Sumac, Extract

	Gallons.	Dollars.
1891	239,890	77,152
1901	161,317	52,105
1913	1,270,825	44,568
1914	1,463,297	59,022
1915	727,449	35,066
1916	36,003	4,108
1917	161,507	13,944
1918	23,706	2,616
1919	.....	.....
1920	.....	.....
1921	44,049	3,273
1922	37,262	3,875

Sumac, Ground

	Pounds.	Dollars.
1891	11,412,307	235,729
1901	9,935,746	179,801
1913	14,112,112	289,255
1914	9,678,719	231,580
1915	12,048,917	294,434
1916	20,411,022	527,102
1917	10,877,008	337,404
1918	10,557,920	355,192
1919	4,128,309	145,286
1920	16,636,562	593,739
1921	2,245,615	62,786
1922	9,155,685	187,335

Sumac, Unground

	Pounds.	Dollars.
1871	10,141,787	420,823
1881	13,667,892	409,400
1891	2,953,202	67,802
1901	1,482,822	26,138
1913	621,366	12,420
1914	1,335,566	32,238
1915	1,258,204	32,613
1916	1,131,369	28,164
1917	760,015	27,769
1918	3,619,439	141,063
1919	5,182,736	162,557
1920	4,543,852	161,497
1921	481,491	11,236
1922	3,461,640	81,175

Talcum, Steatite and French Chalk, Crude

	Pounds.	Dollars.
1871	162,982	3,905
1881	.....	.....
1891	.....	.....
1901	.....	.....
1914	2,807,974	23,369
1915	3,478,711	15,322
1916	4,681,165	9,703
1917	3,736,899	11,477
1918	4,721,980	10,528
1919	2,804,000	10,324
1920	2,958,582	10,254
1921	844,150	3,026
1922	420,075	5,845

Talcum, Ground, Etc.

	Pounds.	Dollars.
1871	.....	496
1881	.....	18,735
1891	.....	.....
1901	1,138,358	7,574
1913	23,660,095	122,623
1914	32,498,066	173,023
1915	30,434,850	187,871
1916	33,738,067	207,179
1917	34,288,429	238,479
1918	27,550,409	267,265
1919	23,090,219	207,534
1920	36,579,129	365,912
1921	30,653,746	318,058
1922	33,491,507	336,514

Tallow.

	Pounds.	Dollars.
1871	69,244	4,606
1881	65,044	4,318
1891	77,557	3,278
1901	84,449	5,108
1913	490,505	41,710
1914	3,371,833	231,924
1915	12,634,594	823,258
1916	4,779,076	396,787
1917	31,136,527	3,108,274
1918	98,176,560	14,365,676
1919	10,808,742	1,408,007
1920	11,251,437	1,665,799
1921	11,762,499	1,338,362
1922	1,405,820	79,702

Tanks, or Vessels, Cylindrical or Tubular, for Holding Gas, Liquids, or Other Material.

	Number.	Dollars.
1914	.....	459,842
1915	.....	226,911
1916	.....	242,773
1917	.....	234,217
1918	.....	153,716
1919	.....	151,640
1920	.....	385,300
1921	.....	441,371
1922	.....	174,842

Tanning Materials, Crude, Not Stated Elsewhere.

	Pounds.	Dollars.
1881	.....	560
1891	.....	2,603
1901	.....	46,739
1914	.....	81,595
1915	.....	64,995
1916	.....	270,292
1917	.....	365,596
1918	.....	95,446
1919	13,227,193	332,898
1920	49,008,222	1,692,589
1921	25,764,287	657,162
1922	9,214,918	136,184

Quantity not stated prior to 1919.

Tapioca, Tapioca Flour, Cassava or Cassady.

	Pounds.	Dollars.
1871	.....	62,110
1881	4,857,434	187,983
1891	8,147,585	243,885
1901	17,411,046	430,002
1914	71,304,728	1,590,614
1915	60,080,060	1,324,184
1916	64,838,470	1,992,399
1917	100,517,107	3,506,479
1918	92,351,460	4,734,860
1919	53,379,896	2,618,121
1920	119,746,319	6,848,677
1921	56,975,926	2,757,298
1922	72,224,281	1,956,308

Tar, Coal, Crude, and Pitch of.

	Barrels.	Dollars
1891	89,351	236,450
1901	39,062	104,547
1913	14,093	23,691
1914	17,515	25,140
1915	16,391	23,874
1916	19,206	32,635
1917	5,594	10,702

Stated separately after Sept. 8, 1916.

Tar, Coal, Crude.

	Barrels.	Dollars
1891	3,887	11,644
1901	.....	.....
1913	5,864	10,381
1918	10,031	15,603
1919	25,400	42,270
1920	14,439	28,882
1921	29,694	43,318
1922	29,072	57,286

Tar, Coal, Pitch Of.

	Barrels.	Dollars.
1891	.....	15,499
1901	.....	.....
1917	7,258	8,146
1918	15,838	32,582
1919	3,293	7,093
1920	6,168	15,425
1921	6,271	20,060
1922	24	153

Tar and Pitch of Wood.

	Barrels.	Dollars.
1871	.....	5,033
1881	.....	7,769
1891	4,319	13,411
1901	1,797	10,414
1914	561	7,946
1915	129	1,551
1916	31	282
1917	631	5,903
1918	51	214
1919	132	215
1920	287	1,860
1921	712	3,677
1922	166	2,225

Tartrate of Soda and Potassa, or Rochelle Salts.

	Pounds.	Dollars.
1871	100	27
1881	33	9
1891	547	100
1901	272	33
1914	186,305	23,419
1915	253,609	19,244
1916	187	47
1917	17,840	4,352
1918	31,160	8,614
1919	6,742	2,966
1920	69,440	17,580
1921	246,698	48,614
1922	472,626	67,496

Tea, Impure, Waste, Siftings or Sweepings, for Manufacturing Purpose.

	Pounds.	Dollars.
1901	.....	25,802
1914	5,213,956	178,302
1915	4,739,208	153,360
1916	4,796,766	201,507
1917	7,626,688	478,326
1918	10,887,595	782,473
1919	4,860,200	371,975
1920	11,076,802	617,592
1921	12,522,860	738,594
1922	2,823,585	120,887

Terpin Hydrate.

	Pounds.	Dollars.
1914	6,929	1,020
1915	4,477	657
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	.....	.....

Not stated prior to 1914.

Terra Alba, All Kinds

	Pounds.	Dollars.
1871	.....	133,028
1881	.....	39,983
1891	20,762,212	50,128

Terra Alba, Not Made from Gypsum or Plaster Rock

	Pounds.	Dollars.
1920	85,200	674
1921	11,200	133
1922	135,600	1,226

Not stated prior to 1920.

Thorium, Nitrate of.

	Pounds.	Dollars.
1901	12,986	41,663
1913	112,105	212,263
1914	144,413	309,260
1915	78,516	186,385
1916	22,261	63,496
1917	1,877	5,263
1918	.....	.....
1919	.....	.....
1920	15,409	17,503
1921	59,903	103,788
1922	14,745	27,196

Thorium, Oxide and Other Salts of.

	Pounds.	Dollars.
1914	2,465	4,075
1915	82	359
1916	2,612	6,092
1917	1,616	3,984
1918	.....	.....
1919	28	124
1920	.....	.....
1921	.....	.....
1922	7,830	12,329

Not stated prior to 1914.

Thymol.

	Pounds.	Dollars.
1914	19,045	24,765
1915	4,772	12,921
1916	443	1,973
1917	1,759	13,741
1918	34,978	113,279
1919	8,430	75,013
1920	8,948	56,764
1921	9,593	63,326
1922	8,305	30,740

Not stated prior to 1914.

Tin, Black Oxide of, or Cassiterite.

	Pounds.	Dollars.
1871	.....	3,061
1881	.....	2,510
1891	224	7
1901	2,200	640
1913	82,983	18,536
1914	19,549	3,922
1915	49,068	10,798
1916	40,533	8,134
1917	54,367	12,816
1918	29,014	8,914
1919	.....	.....
1920	*14	6,924
1921	35	16,025
1922	104	31,378

*Quantity stated in tons after 1919.

Tin Foil.

		Dollars.
1871	.....	29,422
1881	.....	33,456
1891	.....	31,880
1901	.....	48,829
1913	.....	430
1914	.....	649
1915	.....	1,216
1916	.....	1,506
1917	.....	2,283
1918	.....	212
1919	.....	84
1920	.....	465
1921	.....	9,371
1922	.....	3,027

Titanium and Ferrotitanium

	Pounds.	Dollars.
1921	2,315	1,030
1922	13,686	3,334

Not stated prior to 1921.

Toluol.

	Pounds.	Dollars.
1917	135,000	81,000
1918	.....	.....
1919	.....	.....
1920	1,195,706	30,768
1921	.....	.....
1922	337	17

Not stated prior to 1917.

Toluolenediamine

	Pounds.	Dollars.
1921	175	238
1922	.....	.....

Not stated prior to 1921.

Tonka Beans.

	Pounds.	Dollars.
1871	.....	19,694
1881	.....	80,636
1891	.....	312,537
1901	.....	19,821
1913	783,888	1,140,409
1914	545,156	677,195
1915	132,119	95,222
1916	143,321	94,700
1917	222,754	156,974
1918	405,429	204,260
1919	85,487	46,591
1920	266,090	255,497
1921	139,649	106,481
1922	149,777	111,284

Turmeric.

	Pounds.	Dollars.
1901	.....	43,874
1913	.....	33,735
1914	.....	22,978
1915	.....	10,145
1916	.....	180,948
1917	.....	112,372
1918	.....	602
1919	689,962	46,205
1920	1,312,539	92,413
1921	737,736	37,136
1922	766,461	26,824

Quantity not stated prior to 1919.

Turpentine, Spirits of.

	Gallons.	Dollars.
1871	128	116
1881	.....	.....
1891	2,900	1,219
1901	12,697	4,486
1913	56,457	19,295
1914	72,679	28,818
1915	13,080	6,095
1916	20,675	8,252
1917	18,286	6,271
1918	1,433	564
1919	1,422	724
1920	28,506	37,555
1921	16,069	15,121
1922	70,467	45,184

Turpentine, Venice.

	Pounds.	Dollars.
1871	.....	2,980
1881	56,732	8,164
1891	70,185	8,138
1901	191,026	14,789
1913	60,678	9,169
1914	112,010	17,434
1915	20,904	3,172
1916	7,901	772
1917	1,045	248
1918	.....	.....
1919	.....	.....
1920	5,283	2,540
1921	10,914	2,626
1922	4,972	1,027

Imports Into the United States

Ultramarine, Dry, in Pulp or Mixed With Oil or Water.

	Pounds.	Dollars.
1871	.....	115,816
1881	913,935	127,352
1891	134,352	11,404
1901	319,903	37,790
1913	695,938	62,250
1914	901,203	78,392
1915	641,381	62,115
1916	401,605	44,709
1917	388,201	36,433
1918	359,136	35,210
1919	197,573	25,861
1920	438,443	41,136
1921	898,739	104,263
1922	688,282	69,599

Umber and Umber Earths.

	Pounds.	Dollars.
1871	470,392	7,064
1881	1,475,835	11,126
1891	1,586,840	17,150
1901	1,798,788	13,689
1914	3,381,919	25,798
1915	7,225,537	36,128
1916	8,914,389	55,076
1917	9,211,112	66,217
1918	665,196	18,850
1919	425,017	11,776
1920	5,007,345	47,205
1921	7,124,483	77,526
1922	2,666,867	39,155

Uranium, Oxide and Salts of.

	Pounds.	Dollars.
1891	.....	1,974
1901	.....	15,573
1913	.....	21,435
1914	.....	5,782
1915	.....	1,969
1916	.....	2,099
1917	.....	3,018
1918	.....	.....
1919	1,154	1,309
1920	.....	.....
1921	441	468
1922	6,894	5,487

Quantity not stated prior to 1919.

Urea.

	Pounds.	Dollars.
1914	17,981	8,798
1915	65,464	31,994
1916	79,172	32,498
1917	56,429	36,248
1918	22,777	17,479
1919	11,576	7,693
1920	18,693	10,784
1921	7,714	5,349
1922	136,161	34,953

Vanilla Beans.

	Pounds.	Dollars.
1871	14,764	113,212
1881	37,214	206,030
1891	171,024	594,949
1901	248,994	875,229
1913	1,049,617	2,641,574
1914	694,531	1,739,674
1915	749,146	1,839,995
1916	796,890	1,474,228
1917	733,565	1,583,325
1918	759,096	1,202,413
1919	1,003,072	1,687,305
1920	1,055,670	2,181,210
1921	977,004	1,811,396
1922	1,186,932	2,024,474

Valerian Root.

	Pounds.	Dollars.
1919	54,847	34,450
1920	184,195	64,863
1921	23,084	4,624
1922	29,041	2,610

Not stated prior to 1919.

Valonia.

	Pounds.	Dollars.
1913	6,295,762	79,610
1914	7,654,056	116,406
1915	6,352,190	88,061
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	150	5
1920	16,636,249	651,984
1921	11,723,598	331,443
1922	23,643,552	444,490

Valonia and Myrabolans Extract for Tanning, Not Containing Alcohol.

	Pounds.	Dollars.
1919	2,037,349	40,202
1920	2,058,075	59,765
1921	967,892	26,215
1922	1,663,783	35,654

Not stated prior to 1919.

Vanillin.

	Ounces.	Dollars.
1901	5,513	2,475
1914	33,668	6,446
1915	451	98
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	.....	.....
1920	71	94
1921	36,178	22,530
1922	10,510	4,240

Varnish, Gold Size, or Japan.

	Gallons.	Dollars.
1871	.....	252
1881	.....	2,789
1891	.....	1,618
*1901	.....	.....
1914	.....	8,706
1915	.....	10,228
1916	.....	423
1917	.....	2,504
1918	.....	1,217
1919	2,005	8,192
1920	930	2,183
1921	1,019	4,456
1922	2,733	7,620

* Included in "All Other."
Quantity not stated prior to 1919.

Varnish, Spirit.

	Gallons.	Dollars.
1891	2,472	7,456
1901	2,603	4,774
1914	10,127	24,329
1915	581	1,937
1916	1,318	6,874
1917	2,771	13,425
1918	1,286	3,033
1919	37	676
1920	782	3,531
1921	707	2,786
1922	2,985	12,431

Varnish, All Other.

	Gallons.	Dollars.
1871	23,862	72,266
1881	86,814	140,651
1891	32,600	91,111
1901	43,007	114,985
1914	16,888	31,032
1915	27,943	51,791
1916	25,542	62,776
1917	20,366	47,740
1918	10,923	24,345
1919	4,256	14,370
1920	24,271	78,507
1921	17,583	65,292
1922	22,758	76,686

Venetian Red.

	Pounds.	Dollars.
1891	.....	19,138
1901	4,517,458	86,492
1914	3,858,611	35,077
1915	2,478,959	20,677
1916	1,687,616	12,947
1917	835,161	8,296
1918	433,638	5,135
1919	275,800	3,627
1920	278,673	4,524
1921	393,722	7,968
1922	72,519	2,246

Verdigris or Acetate and Sub-Acetate of Copper.

	Pounds.	Dollars.
1871	331,657	56,873
1881	160,745	35,163
1891	212,019	32,016
1901	44,439	6,211
1914	19,009	2,530
1915	17,569	2,491
1916	81,005	15,648
1917	50,216	13,052
1918	26,837	8,694
1919	34,280	13,911
1920	8,809	2,122
1921	27,607	5,760
1922	19,569	3,478

Vermilion Reds.

	Pounds.	Dollars.
1871	79,195	43,935
1881	14,243	7,392
1891	35,381	18,632
1901	110,961	27,958
1914	72,881	34,379
1915	95,659	58,697
1916	71,515	92,990
1917	17,557	24,170
1918	7,620	10,116
1919	9,556	17,439
1920	35,670	43,948
1921	22,203	22,868
1922	1,362	927

Wash Blue Containing Ultramarine.

	Pounds.	Dollars.
1891	166,327	23,407
1901	454,032	60,279
1914	.....	12,906
1915	.....	6,485
1916	.....	4,907
1917	.....	25,280
1918	.....	15,686
1919	53,703	11,261
1920	134,812	22,955
1921	83,437	17,206
1922	50,835	7,266

Quantity not stated where no figures are given.

Wax, Mineral or Vegetable

	Pounds.	Dollars.
1881	98,911	12,792
1891	1,486,125	127,159
1901	4,944,891	490,775

Stated separately for later years.

Wax, Mineral.

	Pounds.	Dollars.
1914	7,974,157	537,884
1915	6,284,757	401,500
1916	2,081,083	141,539
1917	2,054,722	150,241
1918	1,708,514	135,920
1919	2,680,155	313,371
1920	2,717,300	423,468
1921	4,757,396	433,076
1922	10,811,967	524,519

Wax, Vegetable.

	Pounds.	Dollars.
1914	4,336,276	1,043,337
1915	5,388,398	999,535
1916	9,594,111	1,551,996
1917	7,210,103	1,742,640
1918	8,636,881	2,670,022
1919	8,331,475	3,012,783
1920	9,949,567	3,681,707
1921	6,235,416	1,600,074
1922	7,242,520	1,012,731

White Lead.

	Pounds.	Dollars.
1871	8,337,842	483,392
1881	1,068,031	60,133
1891	628,414	43,041
1901	379,388	21,993
1914	656,884	44,436
1915	514,876	35,743
1916	153,474	11,970
1917	57,045	5,054
1918	887	239
1919	21,153	2,477
1920	33,472	4,724
1921	225,930	24,690
1922	118,119	11,908

Whiting and Paris White, Dry.

	Pounds.	Dollars.
1871	5,219,396	24,710
1881	1,974,913	7,806
1891	1,042,518	4,239
1901	507,745	1,863
1914	2,361,605	10,453
1915	5,387,038	15,705
1916	3,655,123	14,459
1917	2,147,895	11,292
1918	4,908,295	31,033
1919	586,780	5,097
1920	3,639,237	28,610
1921	20,393,338	191,558
1922	22,391,035	114,784

Witherite.

	Pounds.	Dollars.
1891	.....	13,068
1901	.....	15,208
1914	1,223,926	7,927
1915	838,292	6,674
1916	1,714,414	20,446
1917	1,420,752	16,071
1918	1,194,268	20,146
1919	46,468	2,555
1920	1,195,824	22,465
1921	2,516,289	53,748
1922	2,692,290	41,589

Wood Flour.

	Pounds.	Dollars.
1914	15,171,972	84,751
1915	11,482,934	60,131
1916	13,731,979	74,479
1917	8,703,664	57,521
1918	3,738,486	43,852
1919	840,000	9,559
1920	2,922,063	41,355
1921	9,442,617	196,176
1922	14,481,469	88,513

Xylidine

	Pounds.	Dollars.
1920	56,047	41,237
1921	.....	.....
1922	.....	.....

Not stated prior to 1920.

Xylol.

	Pounds.	Dollars.
1917	181,104	8,836
1918	.....	.....
1919	.....	.....
1920	.....	.....
1921	.....	.....
1922	.....	.....

Not stated prior to 1917.

Zaffer

	Pounds.	Dollars.
1920	230	14
1921	.....	.....
1922	.....	.....

Not stated prior to 1920.

Zinc Bearing Ores, Includes Calamine for Smelting or Refining in Bonded Works for Export

	Zinc contents, pounds.	Dollars.
1913	25,214,528	526,173
1914	11,762,861	169,986
1915	14,259,176	321,135
1916	81,779,564	3,376,166
1917	293,958,919	8,186,015
1918	31,822,890	580,758
1919	63,636,426	1,347,067
1920	18,965,938	310,515
1921	41,628,246	587,126
1922	38,304,275	653,343

Zinc, Ashes of

	Pounds.	Dollars.
1871	2,075,899	103,493
1881	2,044,778	106,990
1891	.....	.....
1901	.....	.....
1921	.....	.....
1922	.....	.....

Zinc, Chloride of.

	Pounds.	Dollars.
1901	898,205	28,192
1913	1,252,319	37,078
1914	789,296	23,503
1915	194,250	5,805
1916	12,043	463
1917	6,216	629
1918	197,570	15,381
1919	.....	.....
1920	80,228	7,762
1921	4,054,862	235,274
1922	3,290,928	104,553

Zinc Dust.

	Pounds.	Dollars.
1913	5,615,766	317,492
1914	4,788,433	223,775
1915	2,278,533	132,822
1916	1,365,705	255,192
1917	522,587	83,016
1918	263,428	25,109
1919	24,982	1,637
1920	98,921	8,036
1921	13,023	2,287
1922	202,006	5,470

Zinc Oxide, Dry.

	Pounds.	Dollars.
1912	4,842,948	310,362
1913	6,148,120	389,485
*1914	1,408,162	88,410

* Figures are for July 1 to October 3, 1913. Stated separately after October 3, 1913.

Zinc, Oxide of, Ground, Dry.

	Pounds.	Dollars.
1891	2,629,858	136,366
1901	2,831,620	145,823
1914	5,315,807	309,106
1915	2,565,434	148,143
1916	1,441,290	244,934
1917	285,433	65,633
1918	294,736	55,302
1919	132,496	30,346
1920	1,549,644	174,658
1921	1,886,076	171,328
1922	5,521,525	352,018

Zinc, Oxide of, Ground in or Mixed with Oil or Water.

	Pounds.	Dollars.
1891	139,371	7,226
1901	53,851	4,182
1914	292,571	21,595
1915	156,451	11,525
1916	66,347	7,187
1917	14,089	1,225
1918	273	57
1919	7,088	1,059
1920	13,571	2,358
1921	89,641	11,009
1922	74,210	11,857

Zinc Sulphate.

	Pounds.	Dollars.
1881	12,898	294
1891	.....	.....
1901	32,812	752
1913	23,778	817
1914	107,065	2,176
1915	68,940	1,027
1916	.....	.....
1917	28	44
1918	21	35
1919	221	113
1920	10	19
1921	100,829	3,314
1922	55,679	1,056

Zinc, Sulphide of, White.

	Pounds.	Dollars.
1901	1,595,236	47,697
1913	5,163,642	144,812
1914	1,338,999	42,130
1915	283,356	8,979
1916	96,402	7,368
1917	53,587	8,451
1918	7,098	4,535
1919	5,703	1,837
1920	15,271	5,475
1921	69,135	16,915
1922	73,334	5,977

Domestic Exports from the United States for Fifty-one Years, 1871-1922

The official record of exports from the United States is not as complete as that of the imports. We have made a compilation of available export figures, and the following tables are as complete as records permit.

Abrasives, Wheels, Emery, and Other

		Dollars.
1891	.....	34,651
1901	.....	172,766
1915	.....	736,879
1916	.....	1,630,265
1917	.....	3,846,101
1918	.....	4,697,443
1919	.....	3,323,219
1920	.....	2,546,991
1921	.....	2,439,021
1922	.....	668,375

Abrasives, All Other

		Dollars.
1901	.....	18,310
1915	.....	1,065,369
1916	.....	1,703,073
1917	.....	2,228,113
1918	.....	1,771,665
1919	.....	2,541,134
1920	.....	3,102,186
1921	.....	3,084,460
1922	.....	1,988,079

Acid, Carbolic

	Pounds.	Dollars.
1918	8,688,554	4,236,288
1919	5,810,314	2,173,171
1920	2,223,205	420,101
1921	659,890	86,297
1922	111,479	19,008

Not stated prior to 1918.

Acid, Nitric

	Pounds.	Dollars.
1918	961,494	101,040
1919	737,273	86,788
1920	820,517	105,882
1921	267,119	48,552
1922	234,736	27,587

Not stated prior to 1918.

Acid, Picric

	Pounds.	Dollars.
1918	53,688,240	33,902,957
1919	12,507,483	6,565,473
1920	8,073	9,430
1921	3,730	2,142
1922	466	288

Not stated prior to 1918.

Acid, Sulphuric

	Pounds.	Dollars.
1913	9,790,532	89,783
1914	12,131,750	125,892
1915	46,771,510	516,436
1916	82,020,246	1,990,532
1917	58,604,048	963,888
1918	67,654,722	1,119,907
1919	47,413,636	805,430
1920	32,334,393	778,287
1921	18,600,704	446,380
1922	13,979,319	265,560

Acids, All Other

		Dollars.
1871	.....	57,730
1881	.....	39,240
1891	.....	121,851
1901	.....	198,233
1913	.....	364,347
1914	.....	357,035
1915	.....	2,611,741
1916	.....	22,717,335
1917	.....	54,725,124
1918	.....	5,673,707
1919	.....	4,573,969
1920	.....	5,297,987
1921	.....	3,029,332
1922	.....	1,019,671

Exports from the United States

Alcohol, Wood and Denatured

	Gallons.	Dollars.
1901	919,504	476,582
1913	1,837,173	788,143
1914	1,598,776	652,486
1915	944,374	438,846
1916	1,472,258	857,161
1917	825,334	646,939
1918	2,538,001	2,070,026
1919	1,339,204	1,299,340
1920	687,008	775,117
1921	467,763	1,031,686
1922	737,050	566,445

Alcohol, Grain, Including Pure, Neutral or Cologne Spirit

	Proof gallons.	Dollars.
1891	418,935	180,290
1901	237,509	97,633
1913	151,232	58,346
1914	187,845	67,728
1915	200,455	108,985
1916	24,433,243	8,784,742
1917	51,941,634	16,027,867
1918	8,351,142	4,619,878
1919	11,884,383	6,145,115
1920	27,376,167	10,455,247
1921	14,635,394	7,569,381
1922	3,180,013	943,774

Aluminum, Ingot Metal and Alloys

	Pounds.	Dollars.
1918	21,207,641	8,611,447
1919	11,363,094	4,194,099
1920	7,834,746	2,330,073
1921	1,989,569	614,142
1922	1,442,589	282,084

Not stated prior to 1918.

Asbestos, Ore and Unmanufactured

	Tons.	Dollars.
1917	219	21,851
1918	767	117,413
1919	520	58,448
1920	1,079	223,560
1921	711	139,918
1922	329	43,302

Not stated prior to 1917.

Ashes, Pot and Pearl

	Pounds.	Dollars.
1871	1,474,954	103,249
1881	1,636,839	141,463
1891	430,582	24,432
1901	1,043,817	56,072

Stated as "Potash, All Other," for later years.

Asphalt and Bitumen, Crude, Refined, or Dried

	Tons.	Dollars.
1914	49,831	1,131,086
1915	28,553	616,240
1916	42,754	830,946
1917	34,423	712,051
1918	22,965	548,745
1919	22,754	729,662
1920	47,024	1,386,770
1921	43,630	1,290,467
1922	43,002	1,183,080

Not stated prior to 1914.

Asphalt and Bitumen, Manufactures of, Except Roofing

		Dollars.
1914	.....	362,347
1915	.....	400,154
1916	.....	510,290
1917	.....	554,065
1918	.....	489,038
1919	.....	673,231
1920	.....	682,753
1921	.....	781,947
1922	.....	505,934

Not stated prior to 1914.

Baking Powder

	Pounds.	Dollars.
1901	822,540	292,081
1914	2,725,964	790,274
1915	3,376,780	881,879
1916	3,969,985	860,118
1917	4,836,844	1,028,352
1918	6,022,402	1,838,808
1919	4,257,487	1,257,805
1920	5,595,126	1,648,906
1921	3,491,666	1,229,400
1922	3,612,397	1,496,446

Bark and Other Tanning Materials, Crude

	Tons.	Dollars.
1871	.....	96,195
1881	.....	120,426
1891	.....	241,382
1901	.....	386,238
1914	1,212	26,939
1915	825	21,424
1916	5,226	123,675
1917	1,850	49,907
1918	194	5,857
1919	726	40,151
1920	518	31,027
1921	382	22,636
1922	957	57,828

Bark for Tanning, Extract of

(See Tanning Extract.)

Bauxite Concentrates

	Tons.	Dollars.
1915	11,949	531,404
1916	19,317	929,309
1917	18,495	1,118,777
1918	21,313	1,463,842
1919	18,187	1,397,200
1920	20,890	1,709,390
1921	13,081	1,066,732
1922	8,832	495,904

Not stated prior to 1915.

Beeswax, Unmanufactured

	Pounds.	Dollars.
1881	164,090	40,203
1891	120,548	30,027
1901	140,276	39,464
1914	96,215	27,292
1915	181,328	57,971
1916	147,772	48,252
1917	383,667	131,691
1918	185,871	68,117
1919	134,508	67,237
1920	641,357	287,051
1921	189,616	80,497
1922	103,475	28,132

Benzol

(See "Coal Tar Distillates.")

Blacking and Polishes

		Dollars.
1915	.....	503,629
1916	.....	784,552
1917	.....	1,036,234
1918	.....	1,009,100
1919	.....	2,077,319
1920	.....	2,845,110
1921	.....	2,072,963
1922	.....	1,544,881

Not stated prior to 1915.

Bones, Hoofs, and Horns, Unmanufactured

		Dollars.
1871	.....	55,629
1881	.....	73,807
1891	.....	335,710
1901	.....	218,680
1913	.....	102,705
1914	.....	61,180
1915	.....	16,182
1916	.....	37,558
1917	.....	39,804
1918	.....	338,642
1919	.....	330,077
1920	.....	374,136
1921	.....	118,021
1922	.....	174,158

Borax

	Pounds.	Dollars.
1920	*10,943,110	905,617
1921	4,368,880	385,650
1922	10,094,724	545,601

*Figures cover period beginning Jan. 1, 1920.

Brushes

		Dollars.
1915	.....	604,916
1916	.....	1,132,262
1917	.....	863,630
1918	.....	984,085
1919	.....	1,324,367
1920	.....	1,710,678
1921	.....	1,878,901
1922	.....	671,206

Not stated prior to 1915.

Calcium Carbide

	Pounds.	Dollars.
1913	33,419,375	990,027
1914	32,845,649	962,040
1915	35,772,867	1,097,952
1916	37,873,692	1,211,267
1917	31,278,971	1,001,861
1918	28,814,176	1,327,864
1919	21,278,167	1,587,984
1920	21,164,404	1,040,754
1921	20,147,753	967,024
1922	12,477,237	629,164

Candles

	Pounds.	Dollars.
1871	2,321,959	348,368
1881	1,780,572	210,842
1891	1,546,079	149,112
1901	2,432,815	236,547
1913	2,595,912	246,274
1914	3,047,756	283,018
1915	4,230,026	417,345
1916	6,120,695	575,650
1917	6,576,632	749,369
1918	5,530,017	900,514
1919	9,305,651	1,901,536
1920	7,691,420	1,494,616
1921	3,252,838	708,148
1922	2,161,076	322,491

Cement, Hydraulic

	Barrels (380 lbs.).	Dollars.
1901	218,240	438,915
1914	2,391,453	2,382,282
1915	2,361,451	3,241,686
1916	2,740,596	3,780,564
1917	2,345,952	4,111,550
1918	2,575,126	5,896,905
1919	1,938,223	5,871,902
1920	3,179,549	9,599,384
1921	2,023,167	7,700,081
1922	1,018,760	3,100,459

Chalk, Manufactures of

		Dollars.
1914	.....	40,154
1915	.....	51,175
1916	.....	60,417
1917	.....	105,202
1918	.....	186,711
1919	.....	273,741
1920	.....	378,200
1921	.....	467,993
1922	.....	199,640

Not stated prior to 1914.

Chewing Gum

		Dollars.
1901	.....	11,686
1914	.....	178,630
1915	.....	281,433
1916	.....	574,423
1917	.....	1,084,732
1918	.....	1,896,135
1919	.....	1,794,880
1920	.....	2,617,483
1921	.....	1,510,679
1922	.....	824,186

Clays, Fire Clay

	Tons.	Dollars.
1871	.....	10,904
1881	.....	156
1891	.....	.....
1901	.....	2,330
1917	44,098	201,398
1918	50,529	310,527
1919	44,002	296,108
1920	32,076	257,443
1921	45,574	387,926
1922	19,241	131,910

Clays, All Other

	Tons.	Dollars.
1871	.....	.....
1881	.....	8,762
1891	.....	26,857
1901	.....	146,131
1917	26,078	169,544
1918	22,293	189,146
1919	23,752	196,943
1920	40,562	440,874
1921	45,505	583,938
1922	17,315	185,714

Coal Tar

	Barrels.	Dollars.
1913	121,108	152,273
1914	22,150	43,145
1915	21,317	39,647
1916	74,809	129,220
1917	62,674	145,574
1918	53,955	147,765
1919	60,672	201,653
1920	81,640	192,294
1921	128,103	287,300
1922	76,653	159,078

Coal Tar Distillates—Benzol

	Pounds.	Dollars.
1918	25,400,852	2,152,315
1919	24,402,278	1,236,282
1920	17,253,314	732,836
1921	66,622,862	3,182,721
1922	55,179,363	1,978,776

Not stated prior to 1918.

Coal Tar Distillates—All Other

		Dollars.
1918	.....	5,620,851
1919	.....	3,748,370
1920	.....	3,618,424
1921	.....	4,101,129
1922	.....	269,893

Not stated prior to 1918.

Coal Tar—Medicinal and Pharmaceutical Preparations

		Dollars.
1891	.....	1,880,728
1901	.....	3,440,177
1913	.....	7,110,493
1914	.....	6,721,978
1915	.....	7,130,379
1916	.....	8,397,971
1917	.....	8,613,202
1918	.....	10,190,188
1919	.....	15,277,037
1920	.....	20,124,561
1921	.....	18,038,328
1922	.....	12,878,175

Copper, Unrefined, Black, Blister and Converter Copper in Bars, Pigs or Other Forms

	Pounds.	Dollars.
1916	4,921,089	1,137,770
1917	18,200,897	5,509,818
1918	26,550,026	6,920,687
1919	1,774,844	483,590
1920	2,929,227	555,615
1921	371,096	85,361
1922	295,935	34,873

Not stated prior to 1916.

Copper, Sulphate of (Blue Vitriol)

	Pounds.	Dollars.
1901	49,223,183	2,324,738
1913	5,052,680	262,561
1914	7,375,775	330,007
1915	10,238,808	445,580
1916	17,978,242	2,469,437
1917	28,128,190	3,012,954
1918	15,164,078	1,431,262
1919	13,223,923	1,339,945
1920	4,511,284	373,834
1921	4,297,378	297,395
1922	4,809,948	227,019

Copper Wire (except insulated)

	Pounds.	Dollars.
1916	24,369,832	5,208,750
1917	28,958,007	9,269,683
1918	18,586,323	5,689,228
1919	42,101,676	12,334,212
1920	48,317,657	11,463,248
1921	24,945,579	5,794,401
1922	8,522,453	1,306,542

Cork, Manufactures of

		Dollars.
1891	.....	7,103
1901	.....	36,717
1913	.....	339,436
1914	.....	.....
1915	.....	211,795
1916	.....	455,424
1917	.....	641,579
1918	.....	847,377
1919	.....	1,150,524
1920	.....	1,140,517
1921	.....	1,757,636
1922	.....	526,082

Druggists' Rubber Sundries

		Dollars.
1918	.....	884,245
1919	.....	1,019,170
1920	.....	1,530,326
1921	.....	1,512,852
1922	.....	802,042

Not stated prior to 1918.

Dyes and Dyestuffs

		Dollars.
1871	.....	655,115
1881	.....	626,749
1891	.....	660,590
1901	.....	394,278
1913	.....	347,656
1914	.....	356,919
1915	.....	1,775,925
1916	.....	5,102,002
1917	.....	11,710,887

Stated separately after 1917; see following classes.

Dyes and Dyestuffs—Aniline

		Dollars.
1918	.....	7,298,298
1919	.....	10,183,948
1920	.....	17,130,397
1921	.....	13,577,788
1922	.....	3,805,917

Dyes and Dyestuffs—Logwood Extract

		Dollars.
1918	.....	2,339,480
1919	.....	1,556,023
1920	.....	1,832,231
1921	.....	1,471,040
1922	.....	557,100

Dyes and Dyestuffs—All Other Extracts

		Dollars.
1918	.....	7,284,110
1919	.....	6,125,394
1920	.....	6,829,937
1921	.....	3,571,309
1922	.....	732,151

Eggs, in the Shell

	Doz.	Dollars.
1871	5,017	1,428
1881	80,146	13,776
1891	363,116	64,259
1901	3,692,875	676,232
1918	18,969,167	7,167,134
1919	28,384,783	12,444,345
1920	38,326,986	19,149,536
1921	26,960,098	11,251,081
1922	33,762,373	10,015,576

Eggs and Egg Yolks, Frozen, Dried, or Canned

		Dollars.
1901	.....	1,610
1913	.....	67,854
1914	.....	47,968
1915	.....	88,865
1916	.....	210,255
1917	.....	72,491
1918	.....	525,880
1919	.....	341,304
1920	.....	282,198
1921	.....	201,832
1922	.....	131,869

Explosives, Dynamite

	Pounds.	Dollars.
1915	7,712,999	924,079
1916	19,561,654	3,656,653
1917	16,254,201	3,488,143
1918	18,911,668	4,991,508
1919	13,525,096	3,190,447
1920	12,566,057	2,519,512
1921	11,878,600	2,451,856
1922	12,312,575	2,254,690

Not stated prior to 1915.

Explosives, Gunpowder, Including Smokeless

	Pounds.	Dollars.
1871	391,300	95,397
1881	1,694,483	275,579
1891	733,834	88,676
1901	1,463,499	193,345
1915	7,686,480	5,091,442
1916	212,821,076	173,736,374
1917	404,668,874	330,664,927
1918	337,505,953	257,190,883
1919	109,613,165	85,812,212
1920	1,721,991	710,397
1921	43,485,291	38,286,158
1922	628,434	323,970

Fertilizers, Ammonia, Sulphate of

	Tons.	Dollars.
1920*	17,489	2,264,387
1921	65,915	7,620,130
1922	168,077	8,720,775

*Figures cover period beginning May 1, 1920.

Fertilizers, Guano

	Tons.	Dollars.
1871	1,203	35,000
1881	959	29,581

Not separately stated for later years.

Fertilizers, Phosphates, Crude

	Tons.	Dollars.
1901	624,966	5,048,393

Stated separately for later years.

Fertilizers, Phosphate High-Grade Hard Rock

	Tons.	Dollars.
1913	494,200	4,942,000
1914	475,335	4,753,350
1915	46,050	460,050
1916	44,330	429,130
1917	14,963	150,505
1918	24,047	174,373
1919	80,834	715,104
1920	351,352	3,884,147
1921	274,953	4,087,512
1922	202,694	2,687,405

Fertilizers, Phosphate Rock, Land Pebble

	Tons.	Dollars.
1913	777,898	4,577,962
1914	1,000,630	5,857,969
1915	222,472	1,276,759
1916	255,206	1,324,877
1917	178,094	705,251
1918	110,909	456,383
1919	78,027	448,855
1920	395,581	2,991,371
1921	651,749	5,684,516
1922	516,635	3,708,250

Fertilizers, Phosphate Rock, All Other

	Tons.	Dollars.
1913	794	4,127
1914	1,906	6,516
1915	887	5,888
1916	350	3,058
1917	8,108	255,389
1918	22,623	198,778
1919	30,026	308,653
1920	30,300	419,667
1921	16,862	277,747
1922	6,571	78,847

Fertilizers, Superphosphates

	Tons.	Dollars.
1917	6,508	67,489
1918	6,155	202,268
1919	51,405	1,548,198
1920	93,432	3,099,855
1921	29,954	1,311,054
1922	14,806	267,739

Not stated prior to 1917.

Fertilizers, All Other

	Tons.	Dollars.
1871	.....	264,837
1881	.....	583,360
1891	231,915	2,182,274
1901	18,760	377,567
1913	74,834	1,875,999
1914	61,601	1,360,903
1915	89,224	2,128,190
1916	124,979	3,580,543
1917	216,222	6,056,887
1918	89,190	4,808,337
1919	106,656	6,384,432
1920	241,215	20,583,984
1921	108,431	5,988,308
1922	41,529	1,539,512

Ferrovanadium

	Pounds.	Dollars.
1915	755,905	641,792
1916	1,113,076	1,013,121
1917	2,613,387	2,831,669
1918	2,089,347	2,582,670
1919	637,604	770,862
1920	184,250	253,579
1921	450,070	916,147
1922	69,952	84,827

Not stated prior to 1915.

Fire Extinguishers

		Dollars.
1917	.....	895,591
1918	.....	1,688,963
1919	.....	1,055,502
1920	.....	887,484
1921	.....	757,572
1922	.....	348,033

Not stated prior to 1917.

Flavoring Extracts and Fruit Juices

		Dollars.
1913	.....	133,990
1914	.....	106,892
1915	.....	136,742
1916	.....	466,914
1917	.....	581,550
1918	.....	1,018,102
1919	.....	949,726
1920	.....	1,425,380
1921	.....	1,236,135
1922	.....	808,182

Fly Paper and Fly Traps

		Dollars.
1914	.....	217,857
1915	.....	115,921
1916	.....	75,155
1917	.....	77,425
1918	.....	102,979
1919	.....	146,690
1920	.....	245,111
1921	.....	283,455
1922	.....	203,871

Formaldehyde (Formalin)

		Dollars.
1918	.....	866,033
1919	.....	797,671
1920	.....	2,289,217
1921	.....	1,376,281
1922	.....	236,728

Not stated prior to 1918.

Exports from the United States

German Silver

		Dollars.
1913	.....	65,362
1914	.....	38,691
1915	.....	30,690
1916	.....	273,826
1917	.....	410,295
1918	.....	270,703
1919	.....	304,514
1920	.....	426,768
1921	.....	720,343
1922	.....	149,813

Ginseng

	Pounds.	Dollars.
1871	114,221	119,385
1881	338,841	561,545
1891	.....	.....
1901	149,069	801,672
1914	224,605	1,832,686
1915	103,184	919,931
1916	256,082	1,597,508
1917	198,483	1,386,208
1918	259,892	1,717,548
1919	281,623	2,057,161
1920	220,970	2,847,900
1921	157,351	1,623,496
1922	189,999	1,605,257

Glass Bottles, Vials, and Jars

		Dollars.
1914	.....	711,353
1915	.....	772,427
1916	.....	2,168,244
1917	.....	2,435,610
1918	.....	2,671,892
1919	.....	3,671,180
1920	.....	7,935,108
1921	.....	7,848,658
1922	.....	2,386,981

Not stated prior to 1914.

Glassware, Chemical

		Dollars.
1918	.....	153,937
1919	.....	198,033
1920	.....	207,366
1921	.....	294,672
1922	.....	172,948

Not stated prior to 1918.

Glass, Common Window

	Boxes (50 sq. ft.)	Dollars.
1891	.....	11,244
1901	.....	55,286
1913	.....	434,361
1914	.....	311,339
1915	489,288	1,443,113
1916	894,793	3,123,916
1917	942,648	3,483,596
1918	718,443	3,401,120
1919	908,962	6,058,427
1920	682,593	4,494,554
1921	357,578	2,396,185
1922	337,578	2,396,185
	25,431	151,100

Quantity not stated prior to 1915.

Glass, Plate, Unsilvered

	Square feet.	Dollars.
1913	165,129	58,830
1914	74,867	35,767
1915	2,730,046	831,727
1916	5,149,512	1,568,181
1917	6,117,955	2,223,329
1918	5,556,719	2,451,918
1919	8,584,758	4,912,896
1920	4,783,766	2,878,628
1921	3,053,579	2,188,104
1922	*2,571,505	*1,158,515

* Figures for six months only, Jan. 1 to June 30, 1922.

Glucose (Corn Sirup)

	Pounds.	Dollars.
1881	821,937	28,587
1891	58,149,427	1,394,131
1901	204,209,974	3,113,898
1913	156,365,604	3,682,371
1914	162,680,378	3,766,284
1915	125,434,878	3,103,561
1916	148,523,098	3,772,860
1917	170,025,606	5,960,586
1918	80,970,744	4,949,159
1919	118,835,491	6,588,697
1920	219,425,235	13,831,817
1921	125,972,386	5,022,693
1922	258,447,893	6,109,862

Glue, of Animal Origin

	Pounds.	Dollars.
1871	81,110	12,316
1881	367,069	59,038
1891	986,552	110,292
1901	2,703,400	254,477
1913	2,544,932	276,619
1914	2,351,770	258,611
1915	2,874,225	298,136
1916	4,946,298	531,329
1917	4,064,231	513,775
1918	4,901,764	837,679
1919	7,283,683	1,432,589
1920	13,039,002	2,186,756
1921	5,977,180	1,147,678
1922	2,101,328	348,643

Glycerin

	Pounds.	Dollars.
1918	21,045,991	10,587,531
1919	13,018,882	6,833,432
1920	2,257,623	522,611
1921	1,388,194	316,753
1922	3,625,999	508,807

Not stated prior to 1918.

Grape Sugar (Corn Sugar)

	Pounds.	Dollars.
1881	12,438,247	422,828
1891	.....	.....
1913	41,783,642	970,025
1914	36,850,496	799,635
1915	33,027,630	781,672
1916	37,863,084	962,101
1917	44,947,709	1,398,145
1918	16,887,557	1,045,512
1919	17,394,892	875,355
1920	25,839,015	1,559,620
1921	15,981,990	836,558
1922	15,534,234	448,244

Grease, Lubricating

		Dollars.
1914	.....	2,394,918
1915	.....	2,384,395
1916	.....	3,994,436
1917	.....	2,816,958
1918	.....	2,986,815
1919	.....	4,710,484
1920	.....	6,157,323
1921	.....	6,851,936
1922	.....	3,172,801

Not stated prior to 1914.

Grease, Soap Stock and Other

		Dollars.
1881	.....	725,321
1891	.....	2,638,886
1901	.....	3,339,948
1914	.....	5,046,959
1915	.....	4,266,097
1916	.....	3,156,568
1917	.....	3,405,227
1918	.....	2,612,488
1919	.....	2,981,497
1920	.....	8,994,603
1921	.....	4,602,801
1922	.....	4,473,359

Hair, Animal, Unmanufactured

		Dollars.
1914	.....	1,085,038
1915	.....	1,402,189
1916	.....	2,038,838
1917	.....	1,451,354
1918	.....	1,080,624
1919	.....	1,223,628
1920	.....	1,686,833
1921	.....	735,266
1922	.....	858,000

Not stated prior to 1914.

Honey

	Pounds.	Dollars.
1871	.....	2,479
1881	.....	109,007
1891	.....	83,325
1901	.....	55,574
1914	.....	135,660
1915	.....	114,038
1916	.....	252,487
1917	.....	736,139
1918	16,090,672	2,509,570
1919	10,368,342	2,422,454
1920	3,659,198	655,482
1921	1,112,015	182,610
1922	2,406,922	261,899

Quantity not stated prior to 1918.

Hops

	Pounds.	Dollars.
1871	3,273,653	316,288
1881	8,990,655	2,016,970
1891	8,736,080	2,327,474
1901	14,963,676	2,466,515
1914	24,262,896	6,953,529
1915	16,210,443	3,948,020
1916	22,409,818	4,383,929
1917	4,824,876	773,926
1918	3,494,579	993,773
1919	7,466,952	2,333,850
1920	30,779,508	17,716,222
1921	22,206,028	10,873,263
1922	19,521,877	4,851,623

Infants' Food

		Dollars.
1918	.....	1,908,384
1919	.....	2,459,635
1920	.....	3,032,330
1921	.....	1,520,259
1922	.....	988,231

Not stated prior to 1918.

Ink, Printers'

		Dollars.
1901	.....	171,758
1915	.....	384,847
1916	.....	682,165
1917	.....	751,411
1918	.....	882,062
1919	.....	1,644,029
1920	.....	1,590,096
1921	.....	1,550,548
1922	.....	858,252

Not stated prior to 1901.

Ink, All Other

		Dollars.
1871	.....	12,158
1881	.....	8,449
1891	.....	122,235
1901	.....	119,467
1915	.....	154,874
1916	.....	285,277
1917	.....	377,446
1918	.....	407,093
1919	.....	726,204
1920	.....	836,436
1921	.....	774,423
1922	.....	319,030

Instruments, Medical and Surgical

		Dollars.
1913	.....	222,650
1914	.....	206,421
1915	.....	560,741
1916	.....	355,170
1917	.....	516,355
1918	.....	671,250
1919	.....	860,179
1920	.....	743,111
1921	.....	802,769
1922	.....	354,287

Instruments, Optical

		Dollars.
1915	.....	1,018,016
1916	.....	2,593,509
1917	.....	2,945,920
1918	.....	1,073,339
1919	.....	1,209,911
1920	.....	1,465,265
1921	.....	1,158,559

Not stated prior to 1915.

1922	.....	798,270

Iron, Pig—Ferromanganese

	Tons.	Dollars.
1901	16	1,296
1918	4,935	1,054,548
1919	2,184	448,899
1920	2,374	354,570
1921	3,335	608,369
1922	1,021	79,195

Iron, Pig—Ferrosilicon

	Tons.	Dollars.
1918	8,599	917,686
1919	3,712	378,523
1920	398	24,578
1921	577	36,725
1922	463	23,493

Lard

	Pounds.	Dollars.
1871	80,037,297	10,563,010
1881	378,142,496	35,226,575
1891	498,343,927	34,414,323
1901	611,357,514	46,560,148
1913	519,025,384	58,167,336
1914	481,457,792	54,402,911
1915	475,531,908	52,440,133
1916	427,011,338	47,634,376
1917	444,769,540	77,608,913
1918	392,506,355	98,216,856
1919	724,771,383	210,175,908
1920	587,224,549	171,523,351
1921	746,157,356	131,329,199
1922	812,379,396	95,007,212

Lard Compounds and Other Substitutes for Lard

	Pounds.	Dollars.
1901	23,359,966	1,449,878
1913	67,456,832	5,915,759
1914	58,303,564	5,489,139
1915	69,980,614	6,045,752
1916	52,843,311	5,147,434
1917	56,359,393	8,269,844
1918	31,278,382	6,633,640
1919	128,157,327	31,138,158
1920	44,195,842	11,850,311
1921	42,155,971	6,099,914
1922	44,147,941	5,119,815

Lard, Neutral

	Pounds.	Dollars.
1913	44,777,692	5,129,899
1914	29,323,786	3,270,236
1915	26,021,054	3,022,321
1916	34,426,590	4,050,397
1917	17,576,240	3,168,089
1918	4,258,529	1,074,603
1919	17,395,888	5,392,710
1920	23,202,027	6,916,279
1921	22,544,303	4,199,296
1922	19,572,540	2,420,461

Lead, Pigs and Bars

	Pounds.	Dollars.
1901	6,354,924	285,158
1914	40,323,662	1,511,800
1915	193,024,221	7,926,604

Stated as following classes after 1915.

Lead, Pigs and Bars, Produced from Domestic Ore

	Pounds.	Dollars.
1916	153,941,629	9,190,302
1917	159,673,425	11,721,520
1918	120,954,274	10,390,928
1919	32,483,910	2,360,495
1920	8,132,608	610,728
1921	2,702,864	225,414
1922	8,787,906	434,965

Lead, Pigs and Bars, Produced from Foreign Ore

	Pounds.	Dollars.
1916	52,265,948	2,114,692
1917	28,254,508	2,108,150
1918	84,260,273	6,965,492
1919	117,378,386	7,879,527
1920	61,648,426	3,596,098
1921	18,896,711	1,049,265
1922	74,685,868	3,472,574

Lime

	Barrels.	Dollars.
1901	28,487	29,562
1913	284,685	214,543
1914	285,749	200,437
1915	169,078	117,644
1916	258,538	143,182
1917	168,521	126,266
1918	142,525	150,197
1919	68,015	108,647
1920	54,424	111,162
1921	64,568	143,068
1922	54,179	87,386

Lime, Acetate

	Pounds.	Dollars.
1901	61,291,544	1,101,037
1913	80,579,838	2,221,427
1914	68,160,224	1,560,933
1915	24,673,247	486,405
1916	18,804,972	961,645
1917	12,959,222	607,847
1918	15,490,032	797,996
1919	9,369,940	401,476
1920	32,885,132	827,096
1921	12,845,700	350,635
1922	27,606,499	587,174

Lime, Chloride of (Bleaching Powder)

	Pounds.	Dollars.
1918	13,060,401	558,066
1919	15,639,918	450,145
1920	31,232,379	840,092
1921	37,425,093	1,146,378
1922	26,439,251	502,870

Not stated prior to 1918.

Matches

		Dollars.
1871	.....	183,829
1881	.....	112,167
1891	.....	73,220
1901	.....	88,739
1917	.....	430,650
1918	.....	471,385
1919	.....	572,481
1920	.....	558,911
1921	.....	389,064
1922	.....	241,059

Metal Polishes

		Dollars.
1913	.....	127,898
1914	.....	162,504
1915	.....	167,277
1916	.....	225,783
1917	.....	214,800
1918	.....	192,691
1919	.....	262,043
1920	.....	451,934
1921	.....	346,104
1922	.....	357,317

Mica and Manufactures of

		Dollars.
1917	.....	88,651
1918	.....	71,283
1919	.....	79,581
1920	.....	155,918
1921	.....	305,345
1922	.....	150,720

Not stated prior to 1917.

Mucilage

		Dollars.
1901	.....	8,907
1913	.....	26,238
1914	.....	26,182
1915	.....	14,504
1916	.....	30,149

Included in following class after 1916.

Mucilage and Paste

		Dollars.
1917	.....	337,125
1918	.....	400,813
1919	.....	469,231
1920	.....	659,727
1921	.....	602,263
1922	.....	238,422

Nickel, Nickel Oxide and Matte

	Pounds.	Dollars.
1901	5,990,676	1,510,508
1915	29,599,612	11,110,699
1916	25,649,995	9,876,403
1917	31,005,606	12,270,854
1918	18,818,212	7,680,502
1919	10,011,826	3,980,036
1920	2,392,614	1,144,083
1921	131,088	56,555
1922	9,897,775	1,147,993

Oilcake, Cocoanut

	Pounds.	Dollars.
1920	224,313	6,404
1921	473,542	11,353
1922	14,724,521	177,444

Not stated prior to 1920.

Oilcake, Corn

	Pounds.	Dollars.
1901	12,703,209	131,774
1913	76,262,845	1,131,330
1914	59,030,623	909,407
1915	45,026,125	798,206
1916	18,996,490	297,041
1917	15,757,612	289,547
1918	457,584	10,246
1919	562,300	16,193
1920	510,800	15,216
1921	1,794,633	29,989
1922	3,596,281	62,242

Oilcake, Cottonseed

	Pounds.	Dollars.
*1901	1,258,687,317	13,119,968
1913	1,128,092,367	15,225,798
1914	799,974,252	11,007,441
1915	1,222,699,889	15,432,126
1916	980,664,572	14,749,489
1917	864,862,875	15,059,920
1918	11,045,263	213,542
1919	179,148,955	5,286,428
1920	338,927,893	11,951,112
1921	359,986,856	7,304,118
1922	415,256,079	8,506,193

* Includes "Meal."

Oilcake, Linseed or Flaxseed

	Pounds.	Dollars.
1918	126,184,029	3,210,734
1919	161,088,337	4,753,170
1920	316,496,323	12,015,139
1921	373,079,051	9,624,882
1922	469,397,376	10,423,426

Oilcake and Meal, Flaxseed or Linseed

	Pounds.	Dollars.
1901	455,154,860	5,471,930
1913	838,119,654	12,982,423
1914	662,868,639	9,650,379
1915	524,794,434	9,048,061
1916	640,916,204	11,935,130
1917	536,976,419	10,255,355

Subdivided after 1917.

Oilcake and Meal, All Other

	Pounds.	Dollars.
1871	203,587,040	4,160,021
1881	448,559,413	6,284,364
1891	633,344,851	7,452,094
1913	6,886,270	104,701
1914	8,484,936	100,445
1915	9,900,878	126,414
1916	28,870,367	410,166
1917	21,558,676	398,681
1918	4,865,602	104,865
1919	60,444,481	1,820,674
1920	60,138,141	1,983,802
1921	9,373,533	234,330
1922	64,091,858	950,858

Oilcake Meal, Cottonseed

	Pounds.	Dollars.
1915	256,365,126	3,474,244
1916	77,256,997	1,149,478
1917	285,297,316	5,221,091
1918	33,635,530	770,192
1919	132,477,150	3,628,074
1920	110,644,890	3,933,800
1921	94,713,965	1,858,061
1922	117,463,957	2,329,717

Not stated prior to 1915.

Oilcake Meal, Linseed or Flaxseed

	Pounds.	Dollars.
1918	25,216,948	684,614
1919	43,699,626	1,164,396
1920	19,839,589	705,668
1921	18,184,807	449,993
1922	14,661,467	319,699

Oil, Animal, Fish

	Gallons.	Dollars
1871	1,402,016	1,145,406
1881	912,380	532,539
1891	1,467,321	401,203
1901	991,870	293,004
1913	1,901,953	501,227
1914	448,366	125,575
1915	88,880	29,802
1916	146,643	69,411
1917	123,848	81,556
1918	455,629	446,589
1919	282,855	365,823
1920	1,310,478	1,172,624
1921	118,261	122,027
1922	304,719	108,400

Oil, Animal, Lard

	Gallons.	Dollars.
1871	147,802	153,850
1881	836,255	558,576
1891	1,092,448	562,986
1901	766,783	438,645
1918	154,988	113,665
1914	110,199	87,364
1915	184,019	111,637
1916	421,969	309,836
1917	329,244	321,721
1918	91,585	126,672
1919	82,470	124,887
1920	124,231	195,252
1921	669,772	87,438
1922	422,509	50,752

Quantity stated in pounds after 1920.

Oil, Animal, Oleo

	Pounds.	Dollars.
1891	80,231,035	7,859,130
1901	161,651,413	11,846,373
1913	92,849,757	10,866,253
1914	97,017,065	10,156,665
1915	80,481,496	9,341,188
1916	102,645,914	12,519,115
1917	67,110,111	11,065,019
1918	56,603,388	12,152,787
1919	59,292,322	15,670,854
1920	74,529,494	21,153,000
1921	106,414,800	15,211,998
1922	117,174,260	12,366,568

Oil, Animal, Not Otherwise Specified

	*Gallons.	Dollars.
1871	80	137
1881	77,496	60,359
1891	512,253	317,594
1901	640,816	286,782
1913	1,603,325	970,717
1914	891,035	609,294
1915	559,197	405,635
1916	655,587	492,964
1917	416,213	378,294
1918	329,576	409,466
1919	1,422,344	2,023,190
1920	1,452,489	2,055,883
1921	2,502,467	393,252
1922	3,413,876	427,114

* Quantity stated in pounds after 1920.

Oil, Mineral, Crude

	Gallons.	Dollars.
1871	9,460,816	1,820,803
1881	39,984,844	3,065,464
1891	91,415,095	5,876,452
1901	138,448,430	6,686,929
1913	195,642,935	7,750,767
1914	146,477,342	6,812,672
1915	152,514,129	4,911,634
1916	163,734,200	5,754,279
1917	176,368,675	7,162,550
1918	185,069,674	9,288,979
1919	163,782,498	9,905,490
1920	356,542,830	24,263,884
1921	355,200,756	29,137,765
1922	378,975,150	16,366,428

Oil, Mineral, Illuminating

	Gallons.	Dollars.
1871	133,007,177	31,309,780
1881	332,283,045	34,317,695
1891	571,119,805	40,221,201
1901	781,207,105	51,477,267
1918	1,048,894,297	66,189,265
1914	1,157,283,310	74,500,162
1915	886,316,740	53,607,082
1916	823,164,882	54,288,788
1917	833,969,012	642,377
1918	528,217,669	47,261,782
1919	725,686,746	81,495,706
1920	915,138,071	120,392,949
1921	833,194,727	128,089,960
1922	807,701,055	76,389,046

Exports from the United States

Oil, Mineral, Lubricating and Heavy Paraffin

	Gallons.	Dollars.
1881	4,852,203	1,054,064
1891	33,514,730	4,858,603
1901	71,457,605	10,006,937
1913	213,671,499	29,574,410
1914	196,884,696	27,852,959
1915	214,429,099	28,499,786
1916	250,392,768	37,451,607
1917	271,028,546	48,649,557

Stated as following classes after 1917:—

Oil, Mineral, Lubricating, Paraffin

	Gallons.	Dollars.
1918	10,287,896	2,131,292
1919	7,596,525	1,173,821
1920	6,823,644	1,527,773
1921	1,183,675	573,450
1922	15,077,854	2,996,612

Oil, Mineral, Lubricating, All Other

	Gallons.	Dollars.
1918	259,385,874	64,030,825
1919	265,552,016	84,982,874
1920	329,288,894	110,539,083
1921	332,274,197	136,495,631
1922	307,794,350	75,113,214

Oil, Mineral, Naphthas, Etc., Gasoline

	Gallons.	Dollars.
1913	81,698,917	10,931,490
1914	151,611,537	21,699,475
1915	156,860,666	17,603,317
1916	100,148,554	16,297,561
1917	226,154,560	46,932,967
1918	260,880,122	61,642,859
1919	322,920,087	78,088,061
1920	294,939,121	72,160,278
1921	382,610,683	103,199,531

Not stated separately after 1921.

Oil, Mineral, Naphthas, Etc., All Other

	Gallons.	Dollars.
1871	7,209,592	746,797
1881	17,292,310	1,693,975
1891	12,171,147	993,056
1901	17,834,254	1,555,608
1913	101,821,572	14,269,878
1914	40,840,730	5,653,210
1915	94,335,128	10,296,928
1916	194,644,803	29,472,233
1917	199,563,352	41,057,840
1918	209,029,477	52,739,227
1919	146,301,861	38,654,419
1920	184,761,512	50,537,352
1921	259,603,571	77,415,408
1922	550,478,181	117,630,281

Oil, Mineral, Residuum

	Gallons.	Dollars.
1871	.....	14,770
1881	*77,330	184,411
1891	*38,066	77,422
1901	*622,538	1,376,047
1913	27,513,568	496,237
1914	113,370,245	1,907,715
1915	9,952,970	230,552
1916	13,538,335	388,175
1917	551,967	33,813
1918	881,875	96,480
1919	181,121	14,557
1920	50,272,002	2,732,783
1921	†9,825,633	609,302
1922	15,834	354,669

* Barrels.
† Stated in tons after 1921.

Oil, Mineral, Gas Oil and Fuel Oil

	Gallons.	Dollars.
1914	475,143,205	13,747,863
1915	672,931,878	18,543,976
1916	897,853,433	24,770,296
1917	1,040,671,713	32,329,617
1918	1,223,283,641	61,137,607
1919	898,044,039	49,918,288
1920	685,738,142	38,195,061
1921	861,934,328	59,237,822
1922	740,196,772	32,099,290

Not stated prior to 1914.

Oil, Mineral, Fuel or Bunker Oil, Laden on Vessels Engaged in Foreign Trade

	Barrels.	Dollars.
1915	2,898,393	2,567,017
1916	4,532,822	4,195,803
1917	5,924,460	6,418,474
1918	5,954,448	8,858,880
1919	8,648,967	17,308,722
1920	19,857,307	43,604,177
1921	28,903,722	72,130,004
1922	29,120,537	49,841,883

Not stated prior to 1915.

Oil, Cocoa Butter

	Pounds.	Dollars.
1920	11,048,416	4,401,482
1921	3,170,617	987,534
1922	1,855,982	513,837

Not stated prior to 1920.

Oil, Cocoanut

	Pounds.	Dollars.
1920	141,088,048	28,968,689
1921	6,639,055	886,574
1922	10,184,734	885,220

Not stated prior to 1920.

Oil, Corn

	Pounds.	Dollars.
1901	*4,808,545	1,831,980
1913	19,739,622	1,292,009
1914	18,281,576	1,307,204
1915	17,789,635	1,302,159
1916	8,967,826	770,076
1917	8,779,760	998,105
1918	1,831,114	306,219
1919	1,095,414	227,727
1920	12,482,679	*954,637
1921	6,919,170	1,033,106
1922	5,280,051	588,269

* "Gallons."

Oil, Cottonseed

	Pounds.	Dollars.
1871	.....	140,577
*1881	3,444,084	1,465,255
*1891	11,003,160	3,975,305
1901	*49,356,741	16,541,321
1913	315,232,892	20,736,972
1914	192,963,079	13,843,179
1915	318,366,525	21,872,940
1916	266,529,960	22,659,800
1917	158,911,767	19,878,325
1918	100,779,981	18,309,854
1919	178,709,033	36,970,545
1920	159,400,618	36,220,529
1921	283,268,025	31,392,838
1922	91,615,635	8,400,072

* "Gallons."

Oil, Linseed

	Gallons.	Dollars.
1871	37,841	35,962
1881	72,190	48,479
1891	76,789	48,267
1901	99,919	66,653
1913	1,733,925	874,461
1914	239,198	134,540
1915	1,212,133	660,089
1916	714,120	479,230
1917	1,201,554	1,117,895
1918	1,187,850	1,532,307
1919	1,096,304	1,805,291
1920	1,136,585	2,086,292
1921	4,209,577	719,414
1922	2,743,484	299,431

Quantity stated in pounds after 1920.

Oil, Peanut

	Pounds.	Dollars.
1920	4,922,781	1,196,831
1921	1,594,643	223,680
1922	1,802,221	184,744

Not stated prior to 1920.

Oil, Soya Bean

	Pounds.	Dollars.
1920	67,781,974	14,911,973
1921	5,117,605	760,643
1922	537,331	34,631

Not stated prior to 1920.

Oil, Peppermint

	Pounds.	Dollars.
1891	45,321	120,831
1901	60,166	63,072
1913	144,663	395,551
1914	117,809	397,050
1915	184,981	384,593
1916	154,096	323,070
1917	100,032	218,627
1918	76,247	233,899
1919	65,548	325,070
1920	90,205	677,605
1921	50,425	286,624
1922	154,344	314,643

Oils, Vegetable, All Other, Fixed or Expressed

	Dollars.
1891	93,429
1901	363,066
1913	420,360
1914	338,956
1915	1,198,852
1916	2,230,002
1917	3,004,283
1918	3,951,659
1919	18,512,517
1920	3,258,446
1921	1,013,541
1922	944,361

Oils, Vegetable, All Other, Volatile or Essential

	Dollars.
1871	119,311
1881	92,738
1891	65,104
1901	169,004
1913	325,040
1914	230,557
1915	413,104
1916	705,037
1917	1,062,809
1918	857,044
1919	1,216,870
1920	1,551,992
1921	890,472
1922	521,907

Oleomargarine, Imitation Butter

	Pounds.	Dollars.
1881	26,327,671	3,815,560
1891	1,986,743	255,024
1901	12,990,699	484,501
1913	2,987,582	311,485
1914	2,532,821	263,453
1915	5,252,183	617,035
1916	5,426,221	640,480
1917	5,651,267	901,659
1918	6,309,896	1,631,267
1919	18,570,400	5,179,429
1920	20,952,180	6,047,413
1921	6,219,165	1,478,649
1922	1,989,421	353,803

Paints, Dry Colors, Lampblack

	Dollars.
1871	25,980
1881	51,682
1891	.....
1901	.....
1913	505,748
1914	421,548
1915	368,825
1916	521,463
1917	917,303
1918	1,111,265
1919	1,102,767
1920	1,959,208
1921	1,829,987
1922	1,997,271

Paints, Dry Colors, All Other

	Dollars.
1914	690,836
1915	1,072,736
1916	1,591,913
1917	1,810,393
1918	1,907,667
1919	2,808,980
1920	2,991,618
1921	2,170,237
1922	1,236,516

Paints, Ready Mixed

	Gallons.	Dollars.
1914	852,910	1,096,335
1915	703,494	884,700
1916	1,099,721	1,384,226
1917	1,216,062	1,756,393
1918	1,519,472	2,398,332
1919	2,288,632	4,556,192
1920	2,551,531	5,278,390
1921	2,317,630	5,357,696
1922	1,080,699	2,258,019

Paints, Red Lead

	Pounds.	Dollars.
1918	4,792,330	567,854
1919	7,952,730	946,114
1920	3,072,731	348,907
1921	2,046,339	244,151
1922	2,015,696	168,724

Not stated prior to 1918.

Paints, White Lead (Basic Carbonate)

	Pounds.	Dollars.
1914	16,845,154	1,013,506
1915	19,700,810	1,070,646
1916	29,107,449	1,861,730
1917	21,388,938	1,944,145
1918	18,235,783	2,072,352
1919	20,462,348	2,337,318
1920	34,441,918	3,598,913
1921	17,408,803	1,895,696
1922	8,945,730	672,211

Paints, Not Elsewhere Specified

		Dollars.
1871	.....	172,604
1881	.....	287,338
1891	.....	690,698
1901	.....	1,317,961
1914	.....	1,779,363
1915	.....	1,527,494
1916	.....	3,259,539
1917	.....	4,413,549
1918	.....	4,876,312
1919	.....	6,213,430
1920	.....	7,310,876
1921	.....	5,947,461
1922	.....	2,824,548

Paper, Grease, and Waterproof

		Dollars.
1918	.....	155,188
1919	.....	596,887
1920	.....	239,512
1921	.....	345,366
1922	.....	107,256

Not stated prior to 1918.

Paraffin and Paraffin Wax

	Pounds.	Dollars.
1871	37,423	4,758
1881	5,369,821	437,187
1891	66,366,003	3,714,649
1901	129,184,964	6,857,288
1913	290,678,861	9,679,273
1914	186,357,728	6,516,338
1915	330,374,056	10,589,843
1916	360,650,114	12,873,250
1917	348,743,903	16,038,811

Stated as following classes after 1917:—

Paraffin Wax, Unrefined

	Pounds.	Dollars.
1918	82,534,361	4,677,280
1919	53,729,436	4,915,237
1920	79,023,341	5,377,069
1921	50,121,130	2,994,654
1922	69,651,581	2,039,943

Paraffin Wax, Refined

	Pounds.	Dollars.
1918	164,159,159	13,860,810
1919	185,078,571	19,642,149
1920	282,384,250	26,088,672
1921	203,289,734	17,524,258
1922	189,864,980	6,965,791

Paste

		Dollars.
1901	.....	863
1913	.....	69,032
1914	.....	68,831
1915	.....	91,522
1916	.....	298,537
1917	.....	299,585

Included in "Mucilage and Paste" after 1917.

Peanuts

	Pounds.	Dollars.
1915	5,875,076	325,725
1916	8,669,430	450,765
1917	22,413,297	1,336,638
1918	12,488,209	1,517,831
1919	13,596,660	1,475,195
1920	14,137,956	1,740,002
1921	13,149,417	1,063,353
1922	12,857,822	814,644

Perfumeries, Cosmetics and All Toilet Preparations

		Dollars.
1871	.....	392,993
1881	.....	292,939
1891	.....	450,663
1901	.....	380,994
1913	.....	1,441,982
1914	.....	1,620,872
1915	.....	1,715,059
1916	.....	2,903,063
1917	.....	3,618,620
1918	.....	3,965,465
1919	.....	6,077,854
1920	.....	7,979,237
1921	.....	6,236,766
1922	.....	5,459,297

Petroleum Jelly

		Dollars.
1913	.....	536,637
1914	.....	661,889
1915	.....	838,842
1916	.....	1,099,315
1917	.....	989,367
1918	.....	1,278,658
1919	.....	2,608,701
1920	.....	3,156,286
1921	.....	2,072,595
1922	.....	1,372,002

Platinum, Unmanufactured

	Ounces, troy.	Dollars.
1913	1,299	57,071
1914	273	12,977
1915	1,397	53,266
1916	1,083	92,388
1917	3,254	207,662
1918	468	50,697
1919	91	10,074
1920	1,640	223,332
1921	3,065	234,804
1922	1,198	84,250

Platinum, Manufactures of (Except Jewelry)

		Dollars.
1913	.....	126,013
1914	.....	71,172
1915	.....	27,101
1916	.....	82,929
1917	.....	77,265
1918	.....	33,557
1919	.....	30,363
1920	.....	85,364
1921	.....	114,873
1922	.....	56,727

Plumbago or Graphite, Unmanufactured

	Pounds.	Dollars.
1881	.....	135
1891	.....	.....
1900	.....	35,908
1913	4,503,569	321,679
1914	5,376,880	387,075
1915	2,324,081	152,446
1916	936,869	46,907
1917	2,500,057	163,333
1918	4,912,730	331,369
1919	1,392,043	102,162
1920	1,306,859	107,552
1921	1,195,228	84,998
1922	1,893,881	90,183

Plumbago or Graphite, Manufactures of, Except Crucibles

		Dollars.
1913	.....	175,583
1914	.....	269,499
1915	.....	368,333
1916	.....	845,729
1917	.....	1,296,305
1918	.....	716,538
1919	.....	862,544
1920	.....	517,188
1921	.....	784,876
1922	.....	391,752

Potash, Chlorate

	Pounds.	Dollars.
1918	1,564,662	681,128
1919	1,903,133	678,276
1920	2,845,858	475,034
1921	1,130,771	179,300
1922	447,730	46,252

Not stated prior to 1918.

Potash, All Other

		Dollars.
1918	.....	961,989
1919	.....	1,318,188
1920	.....	3,362,827
1921	.....	1,309,852
1922	.....	684,554

Not stated prior to 1918.

Quicksilver

	Pounds.	Dollars.
1871	994,035	732,845
1881	2,995,948	1,124,955
1891	157,052	88,359
1901	716,559	400,298
1913	40,410	21,885
1914	64,190	32,241
1915	222,927	155,089
1916	232,763	274,086
1917	1,018,094	1,071,325
1918	502,088	679,414
1919	538,325	651,033
1920	330,175	399,263
1921	27,358	25,022
1922	29,650	19,169

Roots, Herbs, and Barks, Crude, Not Elsewhere Specified

		Dollars.
1901	.....	275,150
1913	.....	424,312
1914	.....	513,071
1915	.....	470,090
1916	.....	768,977
1917	.....	852,256
1918	.....	784,514
1919	.....	1,133,855
1920	.....	1,793,064
1921	.....	836,320
1922	.....	718,183

Rosin

	Barrels.	Dollars.
1871	511,959	1,600,651
1881	1,023,710	2,529,423
1891	1,790,251	3,467,199
1901	2,820,815	4,742,457
1913	2,806,046	17,359,145
1914	2,417,950	11,217,316
1915	1,372,316	6,220,321
1916	1,571,279	8,874,313
1917	1,638,590	10,705,972
1918	1,070,929	7,878,718
1919	881,777	11,323,381
1920	1,322,034	24,847,681
1921	877,109	10,363,147
1922	1,403,721	6,623,499

Salt

	Pounds.	Dollars.
1871	7,209,560	47,115
1881	2,739,300	14,752
1891	5,242,280	29,510
1901	14,183,167	67,316
1913	128,035,915	441,673
1914	148,931,265	542,783
1915	165,619,386	616,132
1916	165,637,801	600,648
1917	194,151,456	726,761
1918	267,045,840	1,416,798
1919	242,143,146	1,541,766
1920	257,493,745	1,610,061
1921	242,632,102	1,649,423
1922	257,884,879	1,521,529

Seed, Cotton

	Pounds.	Dollars.
1871	.....	29,386
1881	75,693	3,031
1891	10,108,014	85,315
1901	43,329,257	366,953
1913	24,048,647	328,988
1914	16,342,384	215,115
1915	6,314,439	94,237
1916	2,475,907	37,811
1917	1,001,369	35,434
1918	1,565,052	57,693
1919	1,603,795	65,937
1920	3,506,218	197,450
1921	4,811,313	246,783
1922	2,355,318	83,755

Seed, Flax

	Bushels.	Dollars.
1871	282	721
1881	.....	.....
1891	144,848	184,564
1901	2,755,683	4,319,102
1913	16,894	26,690
1914	305,546	436,874
1915	4,145	9,748
1916	2,614	6,501
1917	1,017	3,671
1918	21,481	98,165
1919	15,574	110,142
1920	24,044	182,796
1921	1,481	4,378
1922	2,267	7,607

Soap, Toilet or Fancy

		Dollars.
1871	.....	19,954
1881	.....	44,396
1891	.....	86,704
1901	.....	562,514
1913	.....	2,132,663
1914	.....	2,141,633
1915	.....	1,777,342
1916	.....	2,610,481
1917	.....	2,122,674
1918	.....	2,246,258
1919	.....	3,896,179
1920	.....	6,625,259
1921	.....	4,182,428
1922	.....	2,621,943

Soap, Except Toilet or Fancy

	Pounds.	Dollars.
1871	7,786,276	576,026
1881	13,323,737	650,361
1891	25,750,671	1,050,559
1901	28,779,000	1,006,666
1913	51,292,554	2,496,904
1914	58,547,763	2,797,369
1915	63,367,750	3,080,957
1916	75,548,686	3,709,277
1917	73,049,219	4,169,117
1918	82,726,757	6,894,454
1919	143,128,191	13,723,225
1920	155,891,586	16,102,825
1921	85,830,216	8,447,007
1922	78,268,703	6,154,911

Exports from the United States

Soda, Salts and Preparations of

		Dollars.
1915	.....	3,141,022
1916	.....	12,649,854
1917	.....	18,381,450

Not stated prior to 1915 and subdivided after 1917; see following classes.

Soda, Caustic

	Pounds.	Dollars.
1918	134,729,691	8,629,086
1919	127,192,309	6,382,511
1920	229,146,363	9,321,902
1921	101,021,827	5,478,055
1922	123,126,777	4,660,815

Soda, Bicarbonate of

	Pounds.	Dollars.
1920	*11,998,510	360,601
1921	13,353,769	389,337
1922	14,803,631	347,233

*Figures cover period beginning Jan. 1, 1920.

Soda Ash

	Pounds.	Dollars.
1918	198,752,457	6,074,879
1919	191,864,329	6,261,518
1920	116,555,500	2,804,130
1921	113,481,062	3,308,783
1922	33,090,180	757,648

Soda, Sal Soda

	Pounds.	Dollars.
1918	14,076,264	205,489
1919	10,675,870	186,382
1920	12,763,399	202,039
1921	10,376,424	207,539
1922	11,061,664	200,903

Soda, Silicate of (Water Glass)

	Pounds.	Dollars.
1918	26,125,740	373,822
1919	26,009,043	400,508
1920	33,692,535	420,124
1921	23,099,660	321,972
1922	26,024,366	279,041

Soda, Other Salts of

		Dollars.
1918	.....	7,421,521
1919	.....	6,475,158
1920	.....	7,485,008
1921	.....	5,378,899
1922	.....	2,187,515

Spices

		Dollars.
1891	.....	22,440
1901	.....	20,204
1914	.....	84,427
1915	.....	76,297
1916	.....	250,827
1917	.....	287,484
1918	.....	507,712
1919	.....	539,313
1920	.....	607,442
1921	.....	322,524
1922	.....	166,981

Sponges

	Pounds.	Dollars.
1871	.....	1,546
1881	.....	6,736
1891	36,966	20,821
1901	63,654	29,554
1913	205,804	177,059
1914	209,470	173,866
1915	117,618	109,635
1916	197,826	165,884
1917	116,131	129,063
1918	130,471	177,210
1919	187,151	212,641
1920	298,021	307,123
1921	110,928	156,163
1922	92,128	112,249

Starch

	Pounds.	Dollars.
1871	1,761,813	115,698
1881	13,473,419	629,710
1891	12,883,821	475,817
1901	102,800,725	2,005,865
1913	110,987,591	2,609,716
1914	76,713,779	1,825,230
1915	107,036,638	2,939,453
1916	210,185,192	5,576,914
1917	146,423,822	4,721,533

Includes "Cornstarch (except for table use)" prior to 1918; see below.

Starch, Cornstarch

	Pounds.	Dollars.
1918	38,659,323	2,220,377
1919	105,726,970	5,333,480
1920	163,314,642	10,238,284
1921	110,514,424	4,251,173
1922	348,940,114	7,294,865

Starch, All Other

	Pounds.	Dollars.
1918	35,223,390	2,282,015
1919	38,061,260	2,197,518
1920	74,293,884	4,675,096
1921	24,850,212	1,146,163
1922	37,932,600	903,786

Stearin from Animal Fats

	Pounds.	Dollars.
1871	.....	2,506
1881	1,118,848	87,924
1891	1,347,386	62,194
1915	11,457,907	1,083,685
1916	13,062,247	1,461,661
1917	12,936,357	1,798,317
1918	10,360,030	2,181,317
1919	11,537,284	2,309,979
1920	22,505,608	4,717,748
1921	19,177,311	2,429,414
1922	33,017,879	3,183,684

Stearin, Vegetable

	Pounds.	Dollars.
1917	1,321,773	179,092
1918	1,226,127	248,585
1919	782,467	166,428
1920	5,138,225	962,394
1921	1,848,313	224,576
1922	1,949,422	194,596

Not stated prior to 1917.

Sulphur or Brimstone, Crude

	Tons.	Dollars.
1913	73,861	1,353,310
1914	110,022	2,018,724
1915	48,391	885,756
1916	68,460	1,314,290
1917	177,548	3,595,512
1918	140,525	3,842,904
1919	123,891	3,781,386
1920	393,404	8,725,117
1921	376,046	6,546,639
1922	409,722	6,069,871

Surgical Appliances (Not Including Instruments).

		Dollars.
1913	.....	973,733
1914	.....	1,228,467
1915	.....	4,418,308
1916	.....	3,166,718
1917	.....	2,999,809
1918	.....	11,293,791
1919	.....	10,948,727
1920	.....	6,317,345
1921	.....	4,544,760
1922	.....	5,513,774

Tallow (Beef Tallow).

	Pounds.	Dollars.
1871	33,859,317	3,025,035
1881	96,403,372	6,800,628
1891	111,689,251	5,501,049
1901	77,166,889	3,848,561
1913	30,598,309	1,910,439
1914	15,812,831	1,002,011
1915	20,239,988	1,386,445
1916	16,288,743	1,326,472
1917	15,209,369	1,800,909
1918	5,014,964	931,941
1919	16,172,111	2,325,177
1920	32,937,026	5,738,181
1921	16,843,868	1,920,376
1922	27,658,097	1,867,909

Tanning Extracts

		Dollars.
1891	.....	241,382
1901	.....	386,238
1913	.....	524,063
1914	.....	639,941
1915	.....	2,226,457
1916	.....	5,902,799
1917	.....	3,908,753
1918	.....	3,804,563
1919	.....	3,254,947
1920	.....	6,016,438
1921	.....	1,732,198
1922	.....	1,254,046

Tar, Turpentine and Pitch

	Barrels.	Dollars.
1871	32,584	93,884
1881	46,582	109,381
1891	25,806	46,274
1901	50,526	123,464
1914	351,352	568,891
1915	239,661	430,612
1916	67,963	291,731
1917	103,397	561,566
1918	82,030	598,211
1919	48,030	384,263
1920	61,790	534,175
1921	41,748	377,649

Stated separately after 1921.

Tar, Turpentine and Pitch

	Barrels.	Dollars.
1922	9,817	63,158

Figures are for July 1 to Dec. 31. Sub-divided after Dec. 31. See following classes.

Tar and Pitch, Wood

	Barrels.	Dollars.
1922	18,584	87,186

Figures are for Jan. 1 to June 30.

Other Gums and Resins

	Pounds.	Dollars.
1922	746,478	164,741

Figures are for Jan. 1 to June 30.

Tin Pigs, Bars, Etc.

	Pounds.	Dollars.
1917	798,288	427,709
1918	209,391	127,219
1919	488,902	352,483
1920	829,016	500,086
1921	2,564,532	968,354
1922	1,455,677	432,571

Not stated prior to 1917.

Tungsten and Ferrotungsten

	Pounds.	Dollars.
1917	1,784,306	3,597,426
1918	2,184,769	4,056,437
1919	177,123	408,148
1920	17,494	57,820
1921	1,600	1,625
1922	303	13,189

Not stated prior to 1917.

Turpentine, Spirits of

	Gallons.	Dollars.
1871	2,453,554	1,009,508
1881	6,595,528	2,414,719
1891	12,243,621	4,668,140
1901	20,240,851	7,715,029
1913	21,039,597	8,794,656
1914	18,900,704	8,095,958
1915	9,464,120	4,476,306
1916	9,310,268	4,337,563
1917	8,841,875	4,313,670
1918	5,095,124	2,695,935
1919	8,063,578	6,069,853
1920	7,461,355	11,121,864
1921	9,741,711	11,279,253
1922	10,786,280	8,071,839

Turpentine, Wood

	Gallons.	Dollars.
1922	336,744	221,568

Figures are for Jan. 1 to June 30.

Varnish

	Gallons.	Dollars.
1871	54,454	79,292
1881	87,408	156,617
1891	153,365	203,285
1901	606,187	611,459
1913	1,279,777	1,267,860
1914	1,069,501	1,038,864
1915	731,004	682,352
1916	846,362	838,339
1917	891,812	1,104,698
1918	736,949	1,209,762
1919	1,174,664	2,238,384
1920	1,529,592	2,936,950
1921	1,158,025	2,421,839
1922	611,255	1,024,279

Washing Powder and Fluid

	Pounds.	Dollars.
1913	9,923,700	756,762
1914	12,761,958	535,635
1915	14,695,317	635,479
1916	7,875,317	355,926
1917	3,517,441	197,614
1918	4,754,804	243,184
1919	3,984,745	231,786
1920	6,114,816	357,074
1921	4,021,497	267,597
1922	3,346,375	201,609

Yeast

		Dollars.
1901	.....	6,809
1917	.....	1,021,651
1918	.....	918,842
1919	.....	1,116,690
1920	.....	868,718
1921	.....	675,203
1922	.....	670,377

Zinc Dross

	Pounds.	Dollars.
1901	.....	164,140
1914	572,477	29,084
1915	10,361,840	557,247
1916	2,526,288	164,649
1917	10,692,766	886,017
1918	31,104,163	2,283,843
1919	26,500,333	1,929,545
1920	4,097,465	269,997
1921	1,095,186	69,293
1922	10,567,684	373,391

Zinc, Oxide of

	Pounds.	Dollars.
1871	1,082,362	48,292
1881	1,281,375	16,405
1891	8,172,000	142,011
1901	9,456,057	412,719
1914	29,197,790	1,215,360
1915	37,580,411	1,808,970
1916	31,222,228	1,960,589
1917	31,486,877	3,096,019
1918	25,862,063	2,750,610
1919	26,051,535	3,024,198
1920	30,925,243	2,895,933
1921	10,149,360	1,016,784
1922	6,726,285	521,964

The

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ACID PROOF CHEMICAL STONEWARE
FOR EVERY PURPOSE

Durability — Accuracy — Service

OUR WARE WILL WITHSTAND THE ACTION OF ACIDS, ALKALIES AND CHEMICALS, HOT OR COLD, STRONG OR WEAK.

Why Not Adopt an Acid Proof Stoneware With a Body Adapted to Your Requirements

As we do not believe it efficient or practical to use one body, or texture, or in other words, mixtures of clays or the same density or vitrification, for all different pieces of Acid Proof Chemical Stoneware for different places in a system or for diversified uses, any more than that all pieces of ware, small or large, should be made of the same thickness or weight, so, we have for over ten years been making *seven* different bodies or textures with different densities and vitrification and finish — **ALL ACID PROOF**—so as to be able to furnish ware so that each piece will be best adapted to the conditions under which it works.

For example: at the beginning of Nitric or Muriatic Systems there is high temperature, sudden changes, mostly gases and little liquor. Here an open, similar to fireclay structure, tough body is best, such as our No. 2 or No. 3 bodies. Following on through the system there is less and less heat action and gases and more even temperature and liquor. Here we tighten up the body, making the same more dense, by using our bodies No. 5 and No. 6; and then at the faucet draw off to carboys and to storage, No. 7 body in faucets and valves. WE DO NOT RECOMMEND ONE BODY FOR ALL CONDITIONS—LET US HELP YOU TO DECIDE WHAT TEXTURE, DENSITY AND THICKNESS WILL BEST MEET YOUR CONDITIONS from the following seven (7) mixtures or bodies:

Body No. 1 Structure, a porous, open body, light in weight. Liquors would readily run through, but it would hold hot acid gases. USES: Porous carboy stoppers, filtering plates and cups, electrolytic diaphragms, or any pieces for high temperatures and sudden changes. FINISH: Somewhat tough, unglazed. Made in thin or thick heavy pieces.

Body No. 2 Structure, semi-porous, open, rough, body. Liquors would seep through. Excellent for hot gases and sudden changes in temperature. Coarse grain. USES: Baffle plates, heavy tile, covers and blocks for furnaces. Large pipe for hot gases. FINISH: Unglazed or glazed. Rough and rugged. Made in thick, heavy wall only.

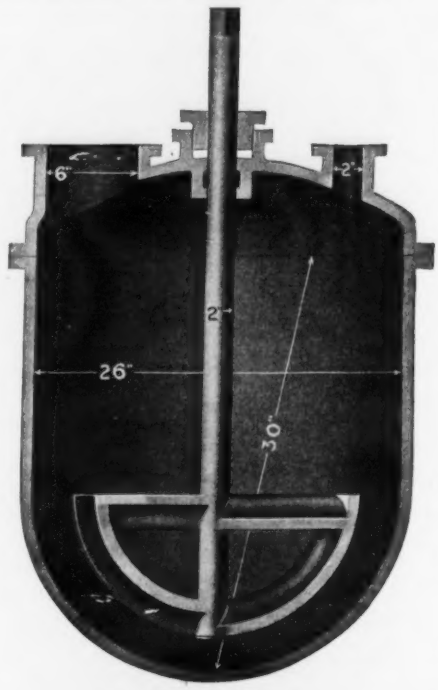


FIGURE 182
Acid Proof 50-Gal. Nitrating Kettle With Stirrer

FIGURE 227
Acid Proof Photo Tank

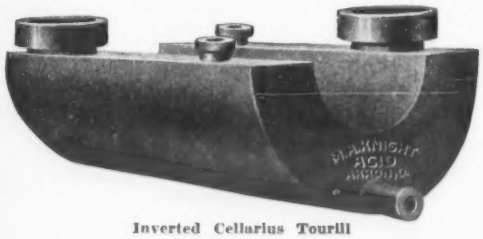
Body No. 3 Structure, fine, close grain. Liquors apt to sweat through. Good for hot liquors and gases and uneven heat action. USES: Standpipe or fittings next to furnaces. Muriatic acid sleeve pipe, boiling kettles, hot towers, burner guards, ejectors and steam jets. FINISH: Smooth, bright, glazed. Made in thin light walls.

Body No. 4 Structure, tough, rugged, vitirified, not as close fine body as No. 3 or No. 5. More vitrified and denser than No. 2. Will hold acid without seepage. USES: Large pieces of 250 gallon capacity and over. Large tower pipe, kettles and blow-cases, grillage tile, brick, heavy tanks. Good for ordinary heat changes and temperature—tower packing. FINISH: Glazed, somewhat rough, very rugged, dull color. Made in heavy thick pieces.

Body No. 5 Structure, close, dense, fine body, much finer than body No. 4. This is the general average body. Will withstand ordinary temperature changes, but not sudden changes. USES: Receivers, tanks, jars, drainage pipe, tourills, evaporating pans, condensing pipe, sinks, arsenic equipment. FINISH: Smooth, bright, glaze. Made in either thin, light weight, or thick, heavy walls.

Body No. 6 Structure, very fine, close, vitrified. Closer and denser body than No. 5. Will not stand heat action as well as lower bodies. No absorption. USES: Acid pitchers, monkey pumps, laboratory sinks, vacuum filters, funnels, flanged pipe, coils, tanks, jars, and other pieces where heat changes are small and slow. Very good for storage vessels, etching machines, chlorine pipe and fittings, etc. FINISH: Bright, clean, smooth, heavy glaze. Made in light, thin and medium weights and thickness.

Body No. 7 Structure, very fine, tight, close body, vitrified to almost a glass texture. Will not withstand changes in temperature, or high temperature. This is the tightest, most highly vitrified, body. No absorption whatever. USES: Valves, faucets, cocks. Pebble mill jars, distilled water jars, small bore pipe and fittings, or any small pieces up to 50 gallon capacity where there is very little heat action. FINISH: Very bright, smooth, glazed, surface. Made in only light, thin weight or small pieces.



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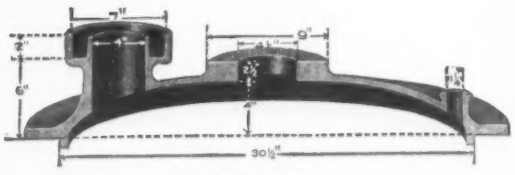

FIGURE 190
Acid Proof Jar Cover With Lute Socket

18 YEARS

MAURICE A. KNIGHT
Manufacturer of
Acid Proof Chemical Stoneware
ACID BRICK, SPECIAL WARE AND PIPE
Office and Factory: Kelley Avenue
AKRON, OHIO

Industrial Chemicals: Market Review

In a survey of the industrial chemical market for 1922 the market might be divided into two periods. One would embrace the first six months, and might be characterized as the foreign; whereas, the other, or domestic period, would comprise the last half of the year. The explanation of these arbitrary terms of description lies in the fact that the export sales of American producers of alkalies and other chemicals were the feature of the first half of the year; whereas, the extremely heavy demand which developed during the last half was solely from domestic sources.

The current figures published during 1922 indicate a most encouraging increase in the export situation. The balance of favor was altogether for the first six months, as after the middle of the summer, there was an appreciable slump in exports of alkalies and blue vitriol, which previously, had been among the leaders. The cessation of exportation of those two valuable chemicals was due (as to alkalies) to the supplying of European markets with caustic, and (in respect to blue vitriol) to the natural ending of the season for the copper sulphate. On the whole, the returns for 1922 were better than since post war depression set in. Quantities involved in these exports did not always come up to the volume of 1917, but were practically always of greater monetary value. While volume was less, the steady appreciation in value resulted in a favorable return.

The bigger export increases came in caustic soda and bleaching powder, acetate of lime and blue vitriol. Exports of blue vitriol doubled from the previous year, and while the expansion in other items was not so great, it was substantial. It provided a great impetus to American producers, and thrust business forward by leaps and bounds. This enormous expansion was later turned to domestic consumptive channels, with a most satisfactory result. By the time the export demand had improved to such an extent that a ready outlet was found for supplies and the high rate of production brought about by the foreign inquiry was not lessened, but rather further broadened by the demand from domestic sources.

The export outlet gradually drying up resulted in a natural swerve to the native industries, and the transition was effected with little break in the tenuity of the market. Of course, it must not be understood that this demand, which existed for export, and which became latter of domestic origin was for everything. On the contrary, it did embrace but a small portion of the entire chemical market. First and foremost were the alkalies—caustic soda, soda ash, and bleaching powder, coupled with blue vitriol and acetate of lime. However, the big export demand for the latter chemical did not hold up so well, and it could be said that domestic demand left much to be desired.

Tariff Helped Strength

The passage of the tariff bill in September had an appreciably strengthening effect on prices, and advances made in many of the imported items simultaneously were precisely the amounts of the new duties. The problem of foreign chemicals had occupied the serious attention of domestic producers for the few years since the war. The necessities of the war had resulted in a widespread gain in production of chemicals in America, had caused large and well equipped plants to be erected. At the cessation of the war, these plants were still being operated and continued successfully for some time.

However, the arrival in this country of German chemicals, which could be sold at extremely low prices forced domestic producers into the background. They could not manufacture at prices at which the imported goods were offered. This caused many plants to remain idle for the most part of a year. It was the temporary inability of European plants to take care of European needs which made possible the heavy American export trade. Shortage of fuel and other factors in production were unfavorable, and this permitted domestic producers to sell at good prices to the foreigners. When the foreign markets were sufficiently stocked, demand ceased. Since then it has not recovered, as European factories have been able to operate in satisfactory fashion to take care of their own requirements, as well as to supply this country with more than it really wanted.

The importation of chemicals continued unabated, and in many items the domestic producer had no chance at all to compete. Caustic potash, for instance, and some of the other potash salts, were nearly 50 per cent cheaper than domestic producers claimed they could produce them. Naturally, the consumer, with no sentiment in the transaction, preferred the foreign because of the cheapness The only items that did not present competition were the alkalies and copper sulphate. Toward the end of the year, however, even small lots of sulphate arrived; but it was then too late to meet the demand.

By and all the year represented a great advancement over the previous one, not only in value of production, but in magnitude of output and consumption. The passage of the new tariff bill was sufficient to advance prices of some foreign items to more fairly competitive levels for domestic producers, although, on the whole, it did not result as favorably to the industry as was hoped. The position in industrial chemicals was hardly the same as in the coal tar products. And the manufacturer could hardly claim the same amount of protection. It has been a fact that this protection has always resulted in consumers paying higher prices. But producers of chemicals have been far enough sighted to know that low prices meant a continuation of good business and satisfied customers, and to that end have kept their values as low as possible. That is why there was such a good export business in caustic soda and bleaching powder. England was a strong competitor, but failed to get the European business that America did, although in possession of quite respectable supplies that might have been used for the export trade. It was only in the East and in Africa that America lost out on the export game, and that through the shortsightedness of operators.

During the years of the war America's trade with India alone increased to over 10 per cent. of the total imports of that country, as against 3 per cent. prior to that time. Since then it has gradually fallen off and was even less at the end of 1922 than it was before the war. The chief reason for the failure of trade with India, which would have been the richest feather in the American commercial cap, was the refusal to extend credit. Cash, cash, was the demand, and gradually this caused the Oriental purchaser to drop out and favor some other one who would take drafts and credits. Reports during the year indicated that a most golden opportunity had been lost.

Caustic Soda Dominated

In any estimate of the market for industrial chemicals for 1922 caustic soda must be in the front rank. That alkali not only saved the first half of the year financially through being in enormous demand for export, but during the last six months domestic demand from the various industries was so great that producers were nearly swamped with orders. Prices during the year did not display great variation. The market pursued a fairly steady tenor, there being minor fluctuations, principally in the export prices. Sales were made as low as $3.35 f.a.s. for 76 per cent. solid during the summer, as against a price of $3.90 in the early spring, when that demand was at the top. For 1922 exports amounted to more than 136,900,479 pounds, as against 40,460,561 pounds for 1921. The value of 1922 shipments was over $4,934,944.

An equally great increase in domestic consumption was observed, but the increase in value was not so great, inasmuch as prices were steadily reduced during the year and stood at $2.50, basis 60 per cent., for the major part. At the end of the year production was at its height and producers were well sold ahead. In fact, so much future business had been accepted that comparatively little interest was displayed in taking orders after the first half of the coming year. The reason was the rising cost of production. Production costs got so high as to be so near the selling levels as to make producers want to go slow.

Soda ash was one of the few alkalies that showed a decrease in foreign business. The sales of this chemical fell off nearly 6,000,000 pounds from 1921 and amounted to only 26,617,260 pounds, valued at $615,722. The domestic demand, on the other hand, was extraordinarily heavy, and conditions paralelled those in caustic soda.

Prices of soda ash were weakest during the early part of the year. The desire of dealers to get rid of goods which had accumulated during the previous fall, so that they would be able to accept deliveries on new contracts was the chief reason for the lower prices. This liquidation lasted for a couple of months, after which prices advanced and were maintained on a very steady basis for the better part of the year. Manufacturers established contract levels during the spring which were maintained unbroken up till December. During the summer and early fall, when demand generally decreases, there was no let up in the movement of ash. Production was stimulated to the fullest capacity, a most unusual procedure for the summer months in the chemical industry. This demand was kept up without a break into the new year. The last month of 1922 saw considerable transportation trouble, but throughout the perilous coal strike and other contrary influences the market was hardly disturbed.

Bleach Was Strong Item

Exports of bleaching powder also showed an enormous increase over the preceding year. Something like 149 per cent. gain was reported. The value of the exports during 1922 was $610,000, while during 1921 exports amounted to $409,000. Most of the export movement in bleaching powder was to Northern European countries. Comparatively little was exported to the Far East or to South America. Likewise, domestic demand for bleach was of a magnitude not seen since the closing of the war. There was fear that there would be a shortage before the end of the year, and while there was little surplus left in producers' hands, fortunately for consumers, there was no drastic shortage

The price of bleach fluctuated within narrow limits during the year, ranging from $2 during the first quarter to as low as $1.60 in May and June. Later, the increasing cost of production resulted in advances, and by October it was back to $2. The chief strengthening factor was, of course, the prolonged coal strike. That made fuel expensive, and as that is a most important factor in the cost of making bleach, it had to be recognized. At the end of the year, producers had sold well ahead and it appeared there would be little left for sale in the open market.

A notable development in the market was the demand for liquid chlorine. That item has been coming in for more popularity and uses are multiplying. Consumers of the powder are finding it more satisfactory for some uses, and gradually sales have increased. The capacity of existing plants was sorely tried by the run of orders the latter part of the year, and plans were afoot for extending facilities to take care of requirements with more ease. The price throughout the whole year was steadily lower in tendency, however, despite the active movement. Early in the year 8c. was easily obtainable, but during the summer contracts were placed at 5c. Later the contract price was advanced ¾c.

Copperas became very scarce during the late summer. Lack of consuming interest at the beginning of the year, difficulties of production later on combined to curtail output. By fall the situation was serious, prices advanced, and except for those who were taken care of on contracts, there were consumers seeking supplies unsuccessfully.

Acetate of lime advanced from $1.75 during the first six months of the year to $3.50 in December, the advances being due entirely to the high cost of production. The advances had considerable influence on other items, and also had a depressing effect on the export situation, inasmuch as the price made it impossible to do much business.

Foreign Potashes Plentiful

Fluctuations in imported potash salts were not great. There were enormous quantities of imported material present throughout the whole year. The passage of the tariff bill had practically no effect on the prices or the flow into this country of German carbonate, caustic and chlorate. Domestic producers were hopelessly at odds in meeting this competition. Their manufacturing costs were higher in practically every instance than foreign material could be sold at. The only item in which any competition was possible was in chlorate of potash, and that was only brought about in the late fall by the diminution of spot stocks and the enhancement of values thereby.

Imported caustic potash was 5¼c. at the beginning of the year. In November it touched 6¾c., which was the highest figure of the year. Carbonate began at 4½c. and advanced to 6½c., after which it gradually declined and was down to 5¾c. at the end of the year. During the whole year domestic producers held the price of caustic at 8c. and did the same for 96@98 per cent. carbonate.

Salt cake came in for much attention. The lack of supplies again turned attention to the natural cake, and some lakes in the West were successfully operated. Unfortunately, the transportation problem proved insurmountable and sales in the East had not been arranged by the end of the year.

Copper sulphate was exported in heavy volume during the early spring and that resulted in the usual surplus being completely wiped out. Consumers who used it for agricultural purposes, coming into the market during May and June, were unable to secure adequate supplies. The price got to $6.25 and farmers had to pay that price for their supplies. The failure of Italian and German factories to supply the necessary quantities to the vineyards of Greece and Italy resulted in an enormous burden thrown on the shoulders of domestic producers. These satisfied the foreigners, but domestic consumers suffered later. However, the season was got through after a fashion and prices subsided somewhat. After having sold at $6.25, the price got down to $5.75, where it stood in December.

Acids

There were not many interesting developments in mineral acids during the first part of last year. Muriatic, nitric and sulphuric were to be had in abundance, and prices for the most part displayed a decidedly weak tone. Muriatic especially was in too great supply for the consumptive needs of the country, and producers were forced to sacrifice prices in order to facilitate distribution of stocks. This habit of price cutting is not always successful in achieving a wider consumption of goods, and in the case of muriatic did not aid the situation in the least. The presence of large quantities in second hands led to final and complete dissipation of whatever of firmness may have remained, and by midsummer factors were glad enough to get what they could for their holdings.

Nitric was technically in an excellent position. There was no resale material of importance to encumber the operations of first hands and weaken the tone through competitive cutting of prices on the part of those in no position to hold goods. The elimination of the speculative element was of great value in maintaining the steadiness which characterized prices throughout the spring and summer. First hands were unable to expand demand with success, but being in possession of practically the whole market enabled them to keep prices at levels compensate with the cost of production. The only influence drastically brought to bear was the unsettlement in nitrate of soda, the chief basic material in the production of nitric. That resulted in a lowering of prices by producers in August, since which time prices stood, with a minor variation, until December.

The improvement which was noticed at the close of 1921 and which resulted in a much firmer market for sulphuric acid, did not continue long into the summer of 1922. Supplies were much in excess of requirements, and inability to carry stocks resulted in some low prices. This unsettlement lasted nearly all summer. However, the early autumn witnessed a radical change for the better in all these mineral acids. Demand began to improve, gradually at first, but later with astonishing rapidity, and prices reacted. Especially keen was the demand for muriatic, and some producers were able to dispose of their complete 1923 production before the first of the year struck. Nitric benefited from the improvement in muriatic and sulphuric, but actually demand did not appear as good for it as for the others. The advent of the fertilizer trade in the sulphuric market was the final encouraging fact, and that market stood firmly braced at the beginning of the new year.

Embargo and Tariff

The embargo which was placed in force in the spring of 1921 and which prohibited the importation of certain chemicals and acids unless under special license—something only rarely obtainable—continued until the passage of the new tariff bill in September, 1922. Among those items excluded in the temporary embargo act were a number of acids, formic, oxalic and lactic being among them. The tariff, of course, allowed their importation at regular rates of duty. The result was the almost immediate arrival in this market of large quantities of formic and oxalic. Prices were low, and domestic producers who had had the field to themselves had to come down to meet the competition. The result has been that some of the lowest prices were established since the war.

However, domestic producers appear to have been able to meet the competition successfully enough without going into bankruptcy. As a matter of fact, prices for oxalic and formic were at the highest just before the new tariff became effective. During the early part of the year absence of demand, keenness of competition between domestic producers (in oxalic only—there has been only one producer of formic in America for the past three years) prices for those two acids were at the low. In December prices were only slightly under those in force in the previous January. The net loss was not great.

The new tariff provides for high rates of duty for both citric and tartaric acids. Italian producers of citric, if they want to keep some hold on the American market, must be able to manufacture and sell here in competition with domestic producers after paying 15c. per pound duty. Since the price of citrate of lime was fixed at the old level for 1923, the outlook was not considered particularly cheerful. The passage of the tariff immediately resulted in higher prices. At one time imported citrate was quoted higher than domestic, a situation brought about by the attitude of domestic producers, who refused to do any business except with bona fide consumers and their regular clients. This naturally cut out the speculative element, and the subsequent manipulations of that portion of the trade resulted in the record citric prices.

The low price of acetate of lime during the spring and summer resulted in very low prices for acetic acid. The low point was reached in May and June, when the low price for the year was established in acetic. Since that time

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a succession of advances in the basic material brought acetic to a point where it was difficult to sell. Consumers refused to take it on account of the high price and contented themselves with substitutes. There are many substitutes for acetic which can be had readily and work very satisfactorily for the most part.

The heavy importations of formic and the low prices at which dealers sold it aided immensely in curtailing the sale of acetic toward the end of the year. Formic acid afforded a very satisfactory material to take the place of acetic in some operations, and at an appreciable saving in cost. Producers of acetic were not at all optimistic at the end of the year over the outlook, feeling that further advances in the cost of raw material would ruin the slender trade they managed to hold on to. A pretty good export inquiry had developed by late fall, but the prices were too high to permit much actual business. Some small lots were moved to England, but beyond sales to that country there was nothing done.

Arsenic: Demand and Supply

By G. S. Loughlin, U. S. Geological Survey [1]

Instability of market continued to be a feature of the arsenic industry in 1922. The demand for white arsenic, the principal commodity, was small and irregular during the first two-thirds of the year, but increased so rapidly during the last third that total sales for the year were exceeded only by those of 1920, as shown in the accompanying table. This increase was due to the demand for calcium arsenate, a temporary shortage of which exists.

The rapid increase in demand in the fall of 1922 was unexpected and found both producers of white arsenic and manufacturers of insecticides unprepared. Supplies for quick delivery were not equal to the demand and prices rose accordingly. The principal producers of white arsenic, however, had by the end of November contracted for advance sales almost to the extent of their capacity at prices averaging about 9 cents a pound gross, and the quoted prices of 15 cents and more in December had very little real significance other than to reflect the manipulation of small quantities of imported white arsenic by brokers. They caused apprehension of a "corner" in arsenic, however, and led the United States Senate to pass resolutions for investigations by the Department of Justice and jointly by the Bureau of Entomolgy and the United States Geological Survey.

The joint report was published in January, 1923,[2] and its principal conclusions are embodied in the following paragraphs. According to this report there did not remain enough white arsenic available for speculators to effect an appreciable corner.

Production Chiefly By-Product

The crude (gray) and refined (white) arsenic produced in 1922 were, as in previous years, almost entirely by-products from copper and lead smelters operated by the American Smelting & Refining Co., the Anaconda Copper Mining Co. and the United States Smelting, Refining & Mining Co., Inc. A small quantity of white arsenic was produced directly from arsenopyrite by the Toulon Arsenic Co., at Toulon, Nev., and some red arsenic sulphide (realgar) was mined and concentrated at Gold Bar, Wash. The crude or gray arsenic was used in the manufacture of weed killer, the demand for which in 1921 and 1922 was much greater than in 1920. The refined (white) arsenic went principally into insecticides, chiefly lead arsenate, although calcium arsenate became the principal product late in the year.

Arsenic sulphide, realgar and orpiment, have been produced only intermittently and in small quantity in the United States. They have not heretofore competed successfully with the smelter by-product as a source of white arsenic, and the demand for them as pigments and dyes, also in the manufacture of fireworks and in some depilatories, has been supplied by imports. It may be noted in the accompanying table that changes in imports of arsenic sulphide have no relation to those of white arsenic. Imports of paris green, london purple and sheep dip are negligible compared with domestic requirements.

Shortage as Early as 1917

The instability of the market for white arsenic is reflected in the preceding table. The increase in sales which began in 1914 served in part to offset a decline in imports and in part to supply an increased demand during the war. In 1917 a shortage developed owing to the unusual demand for insecticides, and a shortage was also expected in 1918; but, owing to greatly reduced consumption by glass manufacturers and to increased imports, a surplus resulted. Domestic production, therefore, declined in 1919, but imports more than doubled. The efficiency of calcium arsenate as a poison for the boll weevil was demonstrated in 1919, and the large increase in production of white arsenic in 1920 was in part to supply a small demand for calcium arsenate in that year and to anticipate a strong demand expected for it in 1921.

Manufacturers of insecticides accordingly produced a large supply only to see the cotton market collapse in 1921 and leave the cotton growers unable to purchase. Discouraged by this situation manufacturers ceased producing in 1921 and some even contracted to sell off their stocks at a loss in 1922. The low prices received acted as a further discouragement to manufacturing, and consequent lack of orders caused the producers and importers of white arsenic to curtail or suspend operations.

Improvement in the cotton market, however, together with liberal financing by Southern banks in 1922, enabled cotton growers to purchase in such quantity that not only were manufacturers' stocks of calcium arsenate (about 8,000,000 pounds) exhausted, but an equal quantity of new calcium arsenate was consumed. The total quantity was equivalent to about 3,600 tons of white arsenic.

It was this change in conditions that caused the advance in price of white arsenic. Until the early fall it was not high enough to encourage production. It then began to increase, but not fast enough to stimulate production to the maximum until December.

Demand Comes Early in Year

As the greater part of the arsenic compounds are insecticides which must be applied during spring and summer, the supply for 1923 must be largely available during the first half of the year. In fact, most of the calcium arsenate must be ready by May 1. According to V. C. Heikes of the United States Geological Survey the minimum requirements for all arsenic compounds in 1923 are equivalent to 12,000 tons of white arsenic, but average requirements together with an expected increase in demand for calcium arsenate may increase this quantity considerably.

The capacity of refineries of white arsenic in the country (18,300 tons) is probably equal to the requirements, and with a continuous price sufficient to maintain a maximum rate of production there is little doubt that sufficient arsenic will be recovered from its ores to permit operation of refineries at capacity. This supply can be augmented by imports. But, though the annual production may equal the annual requirements, the rate of production has not been sufficient to meet the present spring demand, which amounts to more than three-quarters of the annual demand.

To relieve this condition so far as possible producers increased production as rapidly as possible and considerable of the white arsenic that would ordinarily have gone into glass has been diverted into calcium arsenate. Some has similarly been diverted from lead arsenate into calcium arsenate, but there is a feeling that a shortage of lead arsenate may result in middle or late summer. Increase in the production of crude arsenic for the manufacture of weed killers has also released refined white arsenic for calcium arsenate. An increase in imports is also probable, and the present prospect of meeting the demand for calcium arsenate is much more hopeful than it was last December. Considerably more calcium arsenate is already in sight than was used in 1922, and, although it is not enough to supply the maximum demand, the recent cold wave that passed over the cotton belt may have acted as an insecticide also and thereby relieved the situation somewhat.

Adequate Supply Is Likely

The recent experience just reviewed gives much reassurance that domestic production and imports of white arsenic will be sufficient to equal an increasing demand in 1924. There has been some doubt, however, as to whether the by-product arsenic from smelters alone will be sufficient, and whether ores containing nothing of value besides arsenic can be profitably worked under normal conditions; also, whether deposits of this kind are sufficient in size and number to insure an adequate supply of arsenic even under abnormal conditions. Quantitative information on these arsenic deposits is scant, and it is a fact that very few of them have been worked.

In 1922, however, the Houlon Arsenic Co. produced considerable white arsenic from a small deposit of arsenopyrite (mispickel), and it was claimed that this company had developed a successful process for recovering and refining arsenious oxide from ores which could not be worked profitably for any other metal. If a steady market is assured such a process could be established at other deposits, or at some favorable point within reasonable distance of several deposits. It is also reported that arsenopyrite valuable for its content of gold as well as arsenic and formerly shipped direct from Jardine, Mont., to Tacoma, Wash., is to be roasted for its arsenic at Jardine, while the resulting cinder which contains the gold will be shipped to smelters.

New processes for the manufacture of calcium arsenate from material that is inferior or undesirable in current processes have been reported in development and may result in lowering costs of manufacture or in increased output; but it is too early to expect definite results from them. To aid in developing such processes or any other steps that will increase roduction and lower its costs, several movements of almost national scope have been launched.

The most novel and encouraging feature of the arsenic industry in 1922, however, was the establishment of the Salt Lake Insecticide Co.'s process, invented by F. K. Cameron, for the direct manufacture of calcium arsenate from the iron arsenate ore, scorodite. Scorodite is a natural oxidation product of arsenopyrite. In the arid parts of the West it may extend to considerable depth below the surface, but at only one place, Gold Hill, Utah, has a large body of it been developed. The ore is shipped from Gold Hill to Salt Lake City, where it is treated first with caustic soda and converted into sodium arsenate, which then reacts with milk of lime to form calcium arsenate. According to the latest reports, the plant was to begin operations in February, 1923. When in full operation it should add considerably to the country's supply of calcium arsenate.

In the past arsenic has been such a nuisance in smelters and the demand for it so small and uncertain that little or no systematic attention has been given to it. As the present strong demand for it promises to be repeated for the next few years at least, and as new uses for it, as in mosquito control work in the South, are being developed and extended, it is time that a comprehensive study of the arsenic resources of this country and the world, the recovery of arsenic from its ores, the manufacture of arsenic compounds, and the marketing of them, be made. Any improvements in technology will increase the country's reserves of arsenic ore that can be profitably mined.

White Arsenic (As_2O_3) Produced in the United States, 1913 to 1922, Inclusive, in Short Tons

	Domestic sales			Imports							
	White arsenic			White arsenic		Arsenic, sulphide of, or orpiment.		Paris green and London purple.		Sheep dip.	
	Quantity										
Year.	Refined.	Crude.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
1913	2,513	.....	$159,235	1,519	$133,597	3,182	$276,849	50	$4,431	.....	$40,036
1914	4,470	200	313,147	1,594	109,121	2,034	164,592	8	2,235	.....	34,556
1915	5,145	353	302,116	1,400	113,677	1,783	154,099	11	4,069	.....	19,916
1916	5,834	152	555,187	1,071	107,876	1,092	124,818	12	5,028	.....	20,134
1917	6,151	.....	1,118,313	1,178	264,534	2,777	410,341	48 lbs.	189	.....	15,846
1918	6,323	.....	1,213,000	1,847	441,212	4,842	840,600	.....	.....	.....	23,538
1919	6,029	.....	1,181,684	4,389	624,494	2,151	316,687	18 lbs.	14	73	12,346
1920	10,906	596	2,021,356	3,740	532,635	4,080	684,016	772 lbs.	227	35	5,150
1921	3,427	1,359	717,700	1,669	253,250	3,343	531,322	325 lbs.	123	31	6,362
1922	9,581	1,366	*1,486,000	†210	†29,926	†3,292	†403,006	†1,662 lbs.	†288	†9	†1,670

* Refined arsenic only.

† First three-quarters of 1922.

The figures of production are quoted from annual volumes of Mineral Resources of the United States (U. S. Geological Survey) and those of imports are compiled from records of the Bureau of Foreign and Domestic Commerce.

No domestic white arsenic is exported. Some foreign arsenic and arsenic sulphide is re-exported, but has no effect on the present condition of the arsenic industry.

[1] Published by permission of the Acting Director, U. S. Geological Survey.

[2] Report on available supply of arsenic to supply the demand in 1923, by B. R. Coad, Bureau of Entomology, Department of Agriculture, and G. F. Loughlin, U. S. Geological Survey, Department of the Interior.

Industrial Chemicals: Record of Prices

Alum, Ammonia, Lump

On October 18, 1871, the price was $2.15 per 100 pounds; 1881, $2.15; 1891, $1.50; 1901, $1.75; 1911, $1.75; 1913, $1.75; 1918, September, $8.

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$4.50	$4.25	$3.50	$3.50
February	4.25	4.25	3.50	3.50
March	4.25	4.00	3.50	3.50
April	4.00	4.00	3.50	3.50
May	3.75	3.50	3.50	3.25
June	3.50	3.50	3.25	3.25
July	3.50	3.50	3.25	3.25
August	3.50	3.50	3.25	3.25
September	3.50	3.50	3.50	3.25
October	3.50	3.50	3.50	3.50
November	3.75	3.75	3.50	3.50
December	3.75	3.75	3.50	3.50
Year	4.50	3.50	3.50	3.25

Aluminum, Sulphate, Commercial

On August 20, 1894, the price was $1.25 per 100 pounds; 1901, $1.35; 1911, 90c.; 1913, 90c.; 1917, November, $3.50.

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$2.50	$2.25	$1.60	$1.60
February	2.50	2.50	1.60	1.60
March	2.25	2.25	1.60	1.60
April	2.25	2.25	1.55	1.50
May	2.25	2.25	1.50	1.50
June	2.25	2.25	1.50	1.50
July	2.25	2.00	1.50	1.50
August	2.00	1.60	1.50	1.50
September	1.60	1.60	1.50	1.50
October	1.60	1.60	1.50	1.50
November	1.60	1.60	1.60	1.50
December	1.60	1.60	1.50	1.50
Year	2.50	1.60	1.50	1.50

Aluminum, Sulphate, Iron-free

On August 20, 1894, the price was $1.75 per 100 pounds; 1901, $1.75; 1911, $1.75; 1913, $1.25; 1918, October, $4.50.

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$3.50	$3.50	$2.50	$2.50
February	3.50	3.50	2.50	2.50
March	3.00	3.00	2.50	2.50
April	3.00	3.00	2.50	2.50
May	3.00	3.00	2.50	2.50
June	3.00	3.00	2.50	2.50
July	3.00	2.75	2.25	2.25
August	2.75	2.50	2.25	2.25
September	2.50	2.50	2.25	2.25
October	2.50	2.50	2.50	2.25
November	2.50	2.50	2.50	2.50
December	2.50	2.50	2.50	2.50
Year	3.50	2.50	2.50	2.25

Ammonia, Aqua, 26 Degrees

On October 18, 1871, the price was 10¼@11c. per pound; 1881, 9½c.; 1891, 9¼c.; 1901, 5½c.; 1911, 4¾c.; 1913, 4¾c.; 1918, May, 30c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.08	$0.07½	$0.07½	$0.07½
February	.07½	.07½	.07½	.07½
March	.07½	.07½	.07½	.07½
April	.07½	.07½	.07½	.07¼
May	.07½	.07½	.07¼	.07¼
June	.07½	.07½	.07¼	.07
July	.07½	.07½	.07	.06¾
August	.07½	.07½	.07	.06¾
September	.07½	.07½	.07	.07
October	.07½	.07½	.07	.07
November	.07½	.07½	.07	.06¾
December	.07½	.07½	.06¾	.06¾
Year	.08	.07½	.07½	.06¾

Ammoniac, Sal, Lump

On October 18, 1871, the price was 10@10¼c. per pound; 1881, 11@12c.; 1891, 8¼@8½c.; 1901, 5¾@6c.; 1911, 5¾@6½c.; 1917, July, 22c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.17	$0.16½	$0.15	$0.15
February	.16	.16	.15	.15
March	.17	.16	.15	.15
April	.17	.16	.15	.15
May	.17	.15	.15	.15
June	.17	.17	.15	.15
July	.17	.17	.15	.15
August	.17	.17	.15	.15
September	.18	.17	.15	.15
October	.16	.15	.15	.15
November	.15	.15	.16	.15
December	.15	.15	.16	.16
Year	.18	.15	.16	.15

Antimony, Needle

On October 18, 1871, the price was 11¼c. per pound; 1881, 10¾c.; 1891, 8¼c.; 1901, 7¾c.; 1911, 5½c.; 1913, 4½c.; 1917, January, 20c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.07	$0.06	$0.04½	$0.04½
February	.06	.06	.04½	.04½
March	.06	.06	.04½	.04½
April	.06	.06	.05	.04½
May	.06	.06	.04½	.04½
June	.05½	.05	.04¾	.04¾
July	.05	.05	.04¾	.04¾
August	.05	.05	.04¾	.04¾
September	.05	.05	.04¾	.04¾
October	.05	.05	.04¾	.04¾
November	.04½	.04½	.04¾	.04¾
December	.04½	.04½	.05	.04¾
Year	.07	.07	.05	.04½

Argols, Crude, 30 Per Cent.

On October 18, 1871, the price was 6c. per pound; 1881, 4½c.; 1891, 2¾c.; 1901, 2¼c.; 1913, 3c.; 1915, January, 18c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.10	$0.10	$0.10	$0.10
February	.10	.10	.10	.10
March	.10	.10	.10	.10
April	.10	.10	.10	.08
May	.10	.10	.08	.08
June	.10	.10	.08	.08
July	.10	.10	.08	.08
August	.10	.10	.07	.07
September	.10	.10	.07	.07
October	.10	.10	.07	.07
November	.10	.10	.07	.07
December	.10	.10	.07	.07
Year	.10	.10	.10	.07

Arsenic, Red

On October 18, 1871, the price was 5½c. per pound; 1881, 5¾c.; 1891, 5c.; 1901, 7c.; 1911, 6¼c.; 1913, 5¾c.; 1916, December, 70c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.14	$0.14	$0.11	$0.11
February	.14	.14	.11	.11
March	.14	.14	.12	.11
April	.14	.12	.12	.12
May	.12	.12	.12½	.12
June	.12	.12	.12½	.12½
July	.12	.12	.12½	.12½
August	.12	.11	.12½	.12½
September	.11	.11	.12½	.12½
October	.11	.11	.12½	.12½
November	.11	.11	.12½	.12½
December	.11	.11	.13	.12½
Year	.14	.11	.13	.11

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Arsenic, White

On October 18, 1871, the price was 17c. per pound; 1881, 2¾@3½c.; 1891, 2⅞@3c.; 1901, 3¾@3⅞c.; 1911, 2¼@2⅝c.; 1913, 3½c.; 1917, May, 20c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.10¼	$0.09¾	$0.06	$0.05½
February	.09	.09	.07	.06
March	.08¾	.08	.07	.06½
April	.08	.07½	.07	.06¾
May	.07½	.07½	.06¾	.06½
June	.07	.06½	.07¼	.07
July	.06½	.06½	.08¼	.07
August	.06½	.06	.08½	.08½
September	.06½	.06	.08½	.08
October	.06	.05½	.09½	.08
November	.06	.05½	.14	.10¾
December	.06	.05½	.15½	.15
Year	.10¼	.05½	.15½	.05½

Barium Chloride

On August 20, 1906, the price was $33.50 per ton; October 18, 1911, $31.50; 1913, $33; 1916, February, $140.

	Per ton— 1921. H.	L.	1922. H.	L.
January	$75.00	$60.00	$50.00	$50.00
February	60.00	60.00	55.00	50.00
March	60.00	60.00	55.00	55.00
April	60.00	50.00	100.00	55.00
May	55.00	50.00	100.00	100.00
June	58.00	58.00	95.00	95.00
July	58.00	58.00	95.00	87.50
August	58.00	58.00	85.00	80.00
September	50.00	43.00	110.00	80.00
October	55.00	43.00	95.00	90.00
November	55.00	50.00	95.00	90.00
December	55.00	50.00	95.00	95.00
Year	75.00	43.00	110.00	50.00

Bleaching Powder

On October 18, 1871, the price was $3.50 per 100 pounds; 1881, $1.07; 1891, $2.25; 1901, $1.75; 1911, $1.50; 1913, $1.25; 1916, January, $14.

	Per 100 pounds— 1921. H.	L.	1922. H.	L.
January	$2.60	$2.50	$2.00	$2.00
February	2.75	2.50	2.00	1.90
March	2.50	2.35	1.90	1.75
April	2.50	2.50	1.75	1.60
May	2.50	2.50	1.60	1.60
June	2.15	2.15	1.60	1.60
July	2.00	2.00	1.60	1.60
August	2.25	2.00	1.75	1.60
September	2.25	2.25	1.75	1.75
October	2.25	2.25	2.00	1.75
November	2.25	2.10	2.00	1.90
December	2.20	2.10	1.90	1.90
Year	2.75	2.00	2.00	1.60

Brimstone, at Mines

On October 18, 1871, the price was $33.50 per ton; 1881, $31@32; 1891, $20@30; 1901, $24@28; 1911, $22@22.50; 1913, $22; 1917, February, $45.

	Per ton— 1921. H.	L.	1922. H.	L.
January	$20.00	$20.00	$15.00	$15.00
February	20.00	20.00	15.00	14.00
March	20.00	20.00	14.00	14.00
April	16.00	16.00	14.00	14.00
May	16.00	15.00	14.00	14.00
June	15.00	15.00	14.00	14.00
July	15.00	15.00	14.00	14.00
August	15.00	15.00	14.00	14.00
September	15.00	15.00	14.00	14.00
October	15.00	15.00	14.00	14.00
November	15.00	15.00	14.00	14.00
December	15.00	15.00	14.00	14.00
Year	20.00	15.00	15.00	14.00

Chlorine, Liquid

In 1907, when it was first introduced, the price was 25c. per pound; October 18, 1911, 15c.; 1918, June, 22c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.08	$0.08	$0.08	$0.08
February	.08	.08	.08	.06
March	.08	.08	.06	.06
April	.08	.08	.06	.05
May	.08	.08	.05	.05
June	.08	.09	.05	.05
July	.08	.08	.05	.05
August	.08	.08	.05	.05
September	.08	.08	.05¾	.05
October	.08	.08	.05¾	.05¾
November	.08	.08	.05¾	.05¾
December	.08	.08	.05¾	.05¾
Year	.08	.08	.08	.05

Copper Sulphate, 99 Per Cent. (*Blue Vitriol*)

On October 18, 1871, the price was $10.50 per 100 pounds; 1881, $6.50@7; 1891, $3.50@3.75; 1901, $4.75@4.90; 1911, $4.50@4.75; 1913, $5; 1916, January, $23.

	Per 100 pounds— 1921. H.	L.	1922. H.	L.
January	$6.00	$6.00	$5.25	$5.00
February	6.00	6.00	5.45	5.25
March	5.25	5.25	5.75	5.50
April	5.25	5.00	5.60	5.40
May	5.25	5.00	6.00	5.60
June	5.75	5.25	6.25	6.00
July	5.75	5.75	6.25	6.25
August	5.75	5.75	6.00	6.00
September	5.50	5.30	5.90	5.90
October	5.25	5.25	5.90	5.75
November	5.25	5.25	5.75	5.75
December	5.65	5.65	5.90	5.90
Year	6.00	5.00	6.25	5.00

Calcium Carbide

In 1900, when first introduced on a large scale, the price was $5.50 per 100 pounds; 1918, July, $16.

	Per 100 pounds— 1921. H.	L.	1922. H.	L.
January	$4.50	$4.50	$4.50	$4.50
February	4.50	4.50	4.50	4.50
March	4.50	4.50	4.50	4.50
April	4.50	4.50	4.50	4.50
May	4.50	4.50	4.50	4.50
June	4.50	4.50	4.50	4.50
July	4.50	4.50	4.50	4.50
August	4.50	4.50	4.50	4.50
September	4.50	4.50	4.50	4.50
October	4.50	4.50	4.50	4.50
November	4.50	4.50	4.50	4.50
December	4.50	4.50	4.50	4.50
Year	4.50	4.50	4.50	4.50

Carbon Tetrachloride

In January, 1911, the price was 7½c. per pound; October 18, 1913, 7¾c.; 1918, October, 45c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.12	$0.10½	$0.10½	$0.10½
February	.10½	.10½	.10½	.09½
March	.12	.10	.09½	.09½
April	.10	.10	.09½	.09½
May	.10½	.10½	.09½	.09½
June	.10½	.10½	.09½	.09½
July	.10½	.10	.09½	.09¼
August	.10	.10	.09½	.09½
September	.10	.10	.09½	.09½
October	.10½	.10	.09½	.09¼
November	.10½	.10½	.10	.09½
December	.10½	.10½	.10	.10
Year	.12	.10	.10½	.09½

Copperas (*Iron Sulphate*)

On October 18, 1871, the price was $8.50 per 100 pounds; 1881, 60c.; 1891, 80c.; 1901, 30c.; 1911, 60c.; 1913, 70c.; 1918, December, $2.50.

	Per 100 pounds— 1921. H.	L.	1922. H.	L.
January	$1.40	$1.00	$0.75	$0.75
February	1.25	1.25	.75	.75
March	1.25	1.00	.75	.75
April	1.00	.75	.75	.75
May	.75	.75	.75	.75
June	.75	.75	1.00	1.00
July	.75	.75	1.00	.75
August	.75	.75	1.00	.75
September	.75	.75	1.00	1.00
October	.75	.75	1.00	1.00
November	1.00	1.00	1.25	1.25
December	1.00	.75	1.25	1.25
Year	1.40	.75	1.25	.75

Fluorspar, Washed Gravel, 85 Per Cent.

On December 16, 1918, the price was $90 per ton.

	Per ton— 1921. H.	L.	1922. H.	L.
January	Nominal		$20.00	$20.00
February	$22.50	$22.50	20.00	20.00
March	22.50	22.50	20.00	20.00
April	22.50	22.50	20.00	20.00
May	22.50	22.50	20.00	20.00
June	22.50	20.00	20.00	20.00
July	22.50	20.00	20.00	20.00
August	20.00	20.00	20.00	20.00
September	20.00	20.00	20.00	20.00
October	20.00	20.00	20.00	20.00
November	20.00	20.00	20.00	18.00
December	20.00	20.00	18.00	18.00
Year	22.50	20.00	20.00	18.00

Glauber's Salt

On October 18, 1871, the price was $2.10 per 100 pounds; 1881, $1.10; 1891, $1.15; 1901, 90c.; 1911, 75c.; 1913, 60c.; 1918, July, $3.

	Per 100 pounds— 1921. H.	L.	1922. H.	L.
January	$1.75	$1.75	$1.00	$1.00
February	1.75	1.75	1.00	.95
March	1.75	1.75	.95	.85
April	1.75	1.75	.95	.90
May	1.75	1.75	.90	.85
June	1.75	1.50	.85	.75
July	1.50	1.50	.85	.75
August	1.50	1.50	.75	.75
September	1.75	1.50	.75	.75
October	1.75	1.75	.75	.75
November	1.75	1.15	.85	.85
December	1.15	1.00	.85	.85
Year	1.75	1.00	1.00	.75

Lead, Acetate, Brown, Broken

On October 18, 1871, the price was 10¾c. per pound; 1881, 8¼c.; 1891, 6¼c.; 1901, 6c.; 1911, 7¾c.; 1913, 7¾c.; 1918, March, 17c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.13½	$0.13½	$0.09⅝	$0.09⅝
February	.13½	.13½	.09⅝	.09⅝
March	.13½	.12⅝	.09⅝	.09⅝
April	.11⅝	.11⅝	.09⅝	.09⅝
May	.11⅝	.11⅝	.09⅝	.09⅝
June	.11⅝	.10¾	.09⅝	.09⅝
July	.10¾	.10¾	.09⅝	.09⅝
August	.10¾	.10¾	.09⅝	.09⅝
September	.10¾	.10⅝	.09⅝	.09⅝
October	.10⅝	.10⅝	.10⅝	.09⅝
November	.10⅝	.10⅝	.10⅝	.10⅝
December	.10⅝	.10⅝	.10⅝	.10⅝
Year	.13½	.10⅝	.10⅝	.09⅝

Lime, Acetate

In 1871 the price was $6.35 per 100 pounds; 1881, $3.60; 1891, $1.90; 1901, $1.55; 1913, $2; 1916, January, $7.05.

	Per 100 pounds— 1921. H.	L.	1922. H.	L.
January	$2.00	$1.95	$1.75	$1.75
February	1.95	1.95	1.75	1.75
March	1.95	1.50	1.75	1.75
April	2.00	1.75	1.75	1.75
May	1.75	1.75	1.75	1.75
June	2.00	2.00	1.75	1.75
July	2.00	2.00	2.35	2.00
August	2.00	2.00	2.35	2.35
September	2.00	1.75	2.75	2.35
October	1.75	1.75	2.75	2.75
November	1.75	1.75	3.50	3.00
December	1.75	1.75	3.50	3.50
Year	2.00	1.50	3.50	1.75

Nickel Salts, Single

On September 11, 1891, the price was 15c. per pound; October 18, 1901, 10½c.; 1911, 13c.; 1913, 12c.; 1918, September, 17c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.14	$0.13½	$0.12	$0.11
February	.14	.14	.11	.11
March	.14	.14	.11	.11
April	.14	.14	.11	.11
May	.14	.14	.11	.11
June	.14	.12½	.11	.11
July	.12½	.12½	.11	.11
August	.12½	.12	.11	.10
September	.12	.12	.11	.11
October	.12	.12	.11	.11
November	.12	.12	.11	.10½
December	.12	.12	.10½	.10½
Year	.14	.12	.12	.10

Phosphorus, Red

On October 18, 1871, the price was $1.15 per pound; 1881, 58c.; 1891, 65c.; 1901, 60c.; 1911, 50c.; 1913, 50c.; 1918, January, $1.70.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.50	$0.35	$0.45	$0.45
February	.50	.50	.45	.45
March	.50	.50	.45	.45
April	.50	.50	.45	.25
May	.50	.45	.25	.25
June	.45	.45	.25	.25
July	.45	.45	.25	.25
August	.40	.35	.25	.25
September	.35	.35	.25	.25
October	.35	.35	.29	.25
November	.50	.35	.29	.29
December	.50	.45	.30	.29
Year	.50	.35	.45	.25

Phosphorus, Yellow

On October 18, 1871, the price was $1.10 per pound; 1881, 55c.; 1891, 60c.; 1901, 45c.; 1911, 45c.; 1913, 45c.; 1918, January, $2.10.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.30	$0.30	$0.35	$0.30
February	.30	.30	.35	.35
March	.30	.30	.35	.35
April	.30	.30	.35	.25
May	.30	.30	.25	.25
June	.35	.35	.25	.25
July	.35	.35	.25	.25
August	.35	.35	.25	.25
September	.35	.35	.25	.25
October	.30	.30	.28	.25
November	.30	.30	.35	.35
December	.30	.30	.35	.35
Year	.35	.30	.35	.25

Potash, Carbonate, Calcined, 80@85 Per Cent.

On October 18, 1871, the price was 15c. per pound; 1881, .06½c.; 1891, .05c.; 1901, .04¼c.; 1911, .03½c.; 1913, .03c¼.; 1917, November, .70c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.13	$0.11	$0.04¾	$0.04¾
February	.08	.08	.04¾	.04¾
March	.08	.07½	.04¾	.04¾
April	.06¾	.06	.06¼	.04¾
May	.06¾	.06	.05¼	.04¾
June	.06	.05½	.05	.04⅞
July	.05½	.05	.06½	.04½
August	.05	.05	.06¼	.06¼
September	.05	.05	.05	.04¾
Ocotber	.05	.04½	.05½	.05
November	.04½	.04½	.06	.05¾
December	.04½	.04½	.05¾	.05¾
Year	.13	.04½	.06½	.04¾

Potash, Caustic, 88@92 Per Cent.

On October 18, 1871, the price was .07¼c. per pound; 1881, .06c.; 1891, .06¾c.; 1901, .06c.; 1911, .03¾c.; 1913, .04c.; 1916, February, $1.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.14	$0.10	$0.05¼	$0.05¼
February	.10	.10	.05¾	.05
March	.10	.08	.05¾	.05½
April	.08	.06	.06	.05¾
May	.08	.06	.06	.06
June	.05½	.05	.06	.05¾
July	.04¾	.04¾	.05¾	.05⅝
August	.04¼	.04¼	.05½	.05½
September	.05¼	.04¼	.06	.05½
October	.06	.05	.06¼	.06
November	.05¾	.05½	.06½	.06½
December	.06	.05¼	.06⅜	.06¼
Year	.14	.04¼	.06½	.05

Potash, Caustic, 70@75 Per Cent.

On October 18, 1871, the price was .07c. per pound; 1881, .05¼c.; 1891, .06½c.; 1901, .05⅝c.; 1911, .05½c.; 1913, .03½c.; 1917, November, 70c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.14	$0.14	$0.08	$0.08
February	.14	.12	.08	.08
March	.12	.10	.08	.08
April	.10	.10	.08	.08
May	.10	.10	.08	.08
June	.10	.10	.08	.08
July	.10	.10	.08	.08
August	.10	.10	.08	.08
September	.10	.10	.08	.08
October	.10	.10	.08	.08
November	.10	.10	.08	.08
December	.10	.10	.08	.08
Year	.14	.10	.08	.08

Potash, Chlorate

On October 18, 1871, the price was 55c. per pound; 1881, 15⅝c.; 1891, 10⅞c.; 1901, 8¼c.; 1911, 8¼c.; 1913, 8¼c.; 1916, March, 75c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.11	$0.09	$0.05½	$0.05½
February	.08	.08	.05¾	.05½
March	.08	.08	.06	.06
April	.08	.07¾	.06	.06
May	.07¾	.07¾	.06	.06
June	.08	.06½	.06½	.06½
July	.07½	.07½	.06¾	.06¾
August	.07½	.07	.06¾	.06
September	.07¾	.06½	.07	.06
October	.06½	.06	.07½	.07½
November	.06	.05½	.07¾	.07½
December	.05½	.05½	.07½	.07½
Year	.11	.05½	.07¾	.05½

Potash, Permanganate, Technical

In 1901 the price was 9@11c.; October 18, 1911, 8¾c.; 1913, 9¾c.; 1918, September, $2.25.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.55	$0.48	$0.12	$0.12
February	.48	.48	.14	.12
March	.45	.45	.14	.14
April	.35	.35	.15	.14
May	.35	.35	.14	.14
June	.35	.32	.14	.14
July	.30	.27	.15	.15
August	.27	.27	.15	.15
September	.27	.22	.15	.15
October	.22	.19	.15	.14¾
November	.19	.18	.15	.14¾
December	.18	.12	.15	.12
Year	.55	.12	.15	.12

Salt Cake, Ground, Barrels

In October, 1881, the price was $18 per ton; October 18, 1891, $15; 1901, $15; 1911, $12; 1913, $11.50; 1920, August, $80.

	Per ton— 1921. H.	L.	1922. H.	L.
January	$28.00	$26.00	$17.00	$17.00
February	26.00	25.00	17.00	17.00
March	25.00	25.00	17.00	17.00
April	25.00	20.00	21.00	17.00
May	20.00	20.00	18.00	18.00
June	20.00	17.00	18.00	18.00
July	17.00	17.00	18.00	18.00
August	17.00	17.00	20.00	20.00
September	17.00	17.00	25.00	21.00
October	20.00	17.00	25.00	25.00
November	20.00	18.00	25.00	25.00
December	18.00	18.00	25.00	25.00
Year	28.00	17.00	25.00	17.00

Saltpeter, Crystals

On September 16, 1879, the price was 6c. per pound; October 18, 1881, 7c.; 1891, 6¾c.; 1901, 4¼c.; 1911, 4⅜c.; 1913, 6½c.; 1916, January, 38c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.12¾	$0.12¾	$0.08⅝	$0.08⅝
February	.10⅝	.10⅝	.08⅝	.08⅝
March	.10⅝	.10⅝	.08⅝	.08⅝
April	.10⅝	.10⅝	.08⅝	.08⅝
May	.10⅝	.10⅝	.08⅝	.08⅝
June	.10⅝	.10⅝	.07⅝	.07⅝
July	.10⅝	.10⅝	.07⅝	.07⅝
August	.10⅝	.10⅝	.07⅝	.07⅝
September	.10⅝	.10⅝	.07⅝	.07⅝
October	.10⅝	.10⅝	.07⅝	.07⅝
November	.08⅝	.08⅝	.07⅝	.07⅝
December	.08⅝	.08⅝	.07⅝	.07⅝
Year	.12¾	.08⅝	.08⅝	.07⅝

Soda Ash, Light, 58 Per Cent.

On October 18, 1871, the price was $2.70 per 100 pounds; 1881, $1.50; 1891, $1.00; 1901, .85c.; 1911, 80c.; 1913, 85c.; 1916, February, $4.50.

	In bags, per 100 pounds— 1921. H.	L.	1922. H.	L.
January	$2.15	$1.95	$1.75	$1.50
February	2.00	1.95	1.60	1.50
March	1.95	1.90	1.70	1.60
April	1.90	1.85	1.80	1.80
May	1.90	1.85	1.80	1.80
June	1.90	1.90	1.80	1.75
July	1.90	1.90	1.75	1.75
August	2.10	2.00	1.75	1.75
September	2.10	2.10	1.75	1.75
October	2.10	2.05	1.75	1.75
November	2.10	1.90	1.75	1.75
December	1.90	1.70	1.75	1.75
Year	2.15	1.70	1.80	1.50

Soda, Bicarbonate

On October 18, 1871, the price was $4.50 per 100 pounds; 1881, $3.70; 1891, $3.25; 1901, 95c.; 1911, $2.75; 1913, $1; 1918, October, $4.50.

	Per 100 pounds— 1921. H.	L.	1922. H.	L.
January	$2.40	$1.75	$2.00	$2.00
February	2.25	1.75	2.00	1.80
March	2.35	2.35	1.80	1.80
April	2.35	2.25	1.80	1.80
May	2.25	2.25	1.80	1.80
June	2.25	2.25	1.75	1.75
July	2.25	2.25	1.75	1.75
August	2.25	2.25	1.75	1.75
September	2.00	2.00	1.75	1.75
October	2.00	2.00	1.75	1.75
November	2.00	2.00	1.75	1.75
December	2.30	2.00	1.75	1.75
Year	2.40	1.75	2.00	1.75

Soda, Caustic, 76 Per Cent. Solid

On October 18, 1871, the price was $4.88 per 100 pounds; 1881, $3.75; 1891, $1.55; 1901, $1.95; 1911, $1.80; 1913, $1.75; 1917, September, $10.70.

	Per 100 pounds— 1921. H.	L.	1922. H.	L.
January	$3.90	$3.85	$3.75	$3.75
February	3.90	3.70	3.75	3.60
March	3.90	3.90	3.65	3.60
April	3.70	3.90	3.75	3.65
May	3.75	3.60	3.80	3.75
June	4.20	4.00	3.90	3.75
July	4.10	4.00	3.75	3.45
August	3.90	3.80	3.70	3.65
September	4.00	3.90	3.70	3.70
October	4.10	4.00	3.65	3.60
November	4.00	3.85	3.55	3.50
December	3.85	3.75	3.60	3.60
Year	4.20	3.60	3.90	3.45

Soda, Chlorate

On October 18, 1871, the price was 40c. per pound; 1881, 15½c. 1891, 10½c.; 1901, 7¾c.; 1911, 8c.; 1913, 8¼c.; 1916, February, 35c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.10	$0.10	$0.07	$0.07
February	.10	.10	.07	.06½
March	.10	.10	.06¾	.06½
April	.08½	.08½	.06½	.05
May	.08½	.08½	.06	.05½
June	.07½	.07½	.06¼	.06
July	.07½	.07½	.06¼	.06¼
August	.07½	.07½	.06¼	.06
September	.07½	.07½	.06½	.06
October	.07½	.07½	.06½	.06½
November	.07½	.07½	.06½	.06½
December	.07½	.06½	.06½	.06½
Year	.10	.06½	.07	.05

Soda, Cyanide

On October 18, 1913, the price was 25c.; 1917, January, $2.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.22	$0.20	$0.26	$0.26
February	.20	.19	.26	.26
March	.20	.20	.26	.25
April	.20	.20	.25	.25
May	.20	.20	.25	.25
June	.20	.20	.25	.25
July	.20	.20	.25	.21
August	.20	.20	.21	.20
September	.20	.20	.19	.19
October	.27	.20	.20	.19
November	.27	.27	.20	.20
December	.27	.25	.20	.20
Year	.27	.19	.26	.19

Soda, Nitrite, 96 and 98 Per Cent.

Not quoted prior to August, 1917, when price was 44c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.06¾	$0.06	$0.07	$0.06
February	.06	.05¾	.07	.06¾
March	.05¾	.05¾	.07	.07
April	.06	.06	.08½	.07
May	.06	.06	.08½	.07
June	.10	.07½	.08½	.08½
July	.10	.07	.09¾	.08¼
August	.07¼	.07	.07¾	.07½
September	.07	.06¾	.09½	.07¾
October	.06¾	.06½	.08	.07¾
November	.06¾	.06¾	.08¼	.08
December	.06¾	.06	.08	.08
Year	.10	.05¾	.09½	.06

Soda, Sal

On October 18, 1871, the price was $1 per 100 pounds; 1881, $1.10; 1891, $1.05; 1901, 60c.; 1911, 65c.; 1913, 66c.; 1918, November, $2.50.

	Per 100 pounds— 1921. H.	L.	1922. H.	L.
January	$2.00	$2.00	$1.60	$1.40
February	2.00	1.90	1.40	1.40
March	1.90	1.90	1.40	1.40
April	1.90	1.65	1.40	1.20
May	1.65	1.65	1.20	1.20
June	1.65	1.65	1.20	1.20
July	1.65	1.65	1.20	1.20
August	1.65	1.65	1.20	1.20
September	1.65	1.65	1.20	1.20
October	1.90	1.65	1.20	1.20
November	1.90	1.90	1.20	1.10
December	1.90	1.60	1.10	1.10
Year	2.00	1.60	1.60	1.10

Soda, Silicate, 60 Degrees

On January 14, 1901, the price was $2 per 100 pounds; October 18, 1911, $2; 1913, $2; 1918, October, $8.

	Per 100 pounds— 1921. H.	L.	1922. H.	L.
January	$2.75	$2.75	$2.20	$2.20
February	2.75	2.75	2.20	2.20
March	2.75	2.75	2.20	2.20
April	2.75	2.75	2.20	2.20
May	2.75	2.75	2.20	2.20
June	2.75	2.75	2.20	2.20
July	2.75	2.75	2.20	1.75
August	2.75	2.75	1.75	1.75
September	2.75	2.75	1.75	1.75
October	2.75	2.75	1.75	1.75
November	2.75	2.75	1.75	1.75
December	2.75	2.75	1.75	1.75
Year	2.75	2.75	2.20	1.75

Soda Silicate, 40 Degrees

On January 14, 1901, the price was $1 per 100 pounds; October 18, 1911, 65c.; 1913, 66c.; 1918, October, $3.50.

	Per 100 pounds— 1921. H.	L.	1922. H.	L.
January	$1.25	$1.15	$0.85	$0.85
February	1.15	1.15	.85	.85
March	1.15	1.15	.85	.85
April	1.15	1.15	.85	.85
May	1.15	1.10	.85	.85
June	1.25	1.10	.85	.85
July	1.00	1.00	.85	.72½
August	1.00	1.00	.72½	.72½
September	1.00	1.00	.72½	.72½
October	1.00	1.00	.72½	.72½
November	1.00	1.00	.72½	.72½
December	1.00	1.00	.72½	.72½
Year	1.25	1.00	.85	.72½

Soda, Sulphide, 60 Per Cent.

On September 21, 1911, the price was $2.50 per 100 pounds; 1913, $2.50; 1918, November, $12.

	Per hundredweight 1921. H.	1921. L.	1922. H.	1922. L.
January	$6.75	$5.50	$4.25	$4.25
February	5.50	5.00	4.25	4.25
March	5.25	5.00	4.25	4.25
April	5.50	4.75	4.25	4.25
May	4.75	4.75	4.25	4.25
June	4.75	4.75	4.25	4.00
July	5.50	5.50	3.90	3.85
August	5.00	5.00	4.00	3.90
September	4.75	4.40	3.80	3.80
October	4.75	4.50	3.90	3.80
November	5.00	4.50	4.00	3.90
December	4.50	4.25	4.00	4.00
Year	6.75	4.25	4.25	3.80

Soda, Sulphide, 30 Per Cent.

On September 21, 1911, the price was $1.50 per 100 pounds; 1913, $1.50; 1918, October, $7.

	Per hundredweight 1921. H.	1921. L.	1922. H.	1922. L.
January	$3.50	$3.00	$3.00	$3.00
February	3.00	3.00	3.00	3.00
March	3.00	2.75	3.00	3.00
April	2.75	2.75	3.00	3.00
May	2.75	2.75	3.00	2.75
June	3.50	3.00	2.75	2.50
July	3.50	3.50	2.75	2.75
August	3.50	3.50	2.75	2.75
September	3.50	3.00	2.50	2.50
October	3.50	3.00	2.75	2.50
November	3.50	3.00	2.75	2.75
December	3.00	3.00	2.75	2.75
Year	3.50	2.75	3.00	2.50

Soda, Sulphite

On October 18, 1871, the price was 29c. per pound; 1891, 20c.; 1901, 5¼c.; 1911, 2¾c.; 1913, 2¼c.; 1916, January, 6c.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.04	$0.04	$0.03¾	$0.03¾
February	.04	.04	.03¾	.03½
March	.04	.04	.03½	.03½
April	.03¾	.03¾	.03½	.03½
May	.03¾	.03¾	.03½	.03½
June	.03¾	.03¾	.03½	.03½
July	.03¾	.03¾	.03½	.03½
August	.03¾	.03¾	.03½	.03½
September	.03¾	.03¾	.03½	.03½
October	.03¾	.03¾	.03½	.03½
November	.03¾	.03¾	.03½	.03½
December	.03¾	.03¾	.03½	.03½
Year	.04	.03¾	.03¾	.03½

Sulphur, Commercial Flour

On October 18, 1871, the price was $3.25 per 100 pounds; 1881, $2.80; 1891, $3.10; 1901, $1.70; 1911, $2; 1913, $2; 1918, January, $3.75.

	Per 100 pounds 1921. H.	1921. L.	1922. H.	1922. L.
January	$1.60	$1.60	$1.45	$1.45
February	1.60	1.45	1.45	1.45
March	1.45	1.45	1.45	1.45
April	1.45	1.45	1.35	1.35
May	1.45	1.45	1.35	1.35
June	1.45	1.45	1.35	1.35
July	1.45	1.45	1.35	1.35
August	1.45	1.45	1.35	1.35
September	1.45	1.45	1.35	1.35
October	1.45	1.45	1.35	1.35
November	1.45	1.45	1.35	1.35
December	1.45	1.45	1.35	1.35
Year	1.60	1.45	1.45	1.35

Tin, Bichloride

In 1871 the price was 45c. per pound; October 18, 1881, 36½c.; 1891, 24⅝c.; 1901, 11⅞c.; 1911, 11½c.; 1913, 12½c.; 1918, April, 29c.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.11	$0.11	$0.09	$0.09
February	.10¼	.10¼	.09	.09
March	.10¼	.10¼	.09	.09
April	.09¼	.09¼	.09	.09
May	.09¼	.09¼	.09	.09
June	.09¾	.09¾	.09	.09
July	.09¾	.09¾	.10	.09
August	.09¾	.09¾	.10¼	.10
September	.09¾	.09¾	.10½	.10¼
October	.09¾	.09¾	.10½	.10½
November	.09½	.09½	.10½	.10½
December	.09½	.09½	.11	.10½
Year	.11	.09¼	.11	.09

Tin, Oxide

On January 28, 1901, the price was 47c. per pound; October 18, 1911, 43c.; 1913, 44c.; 1918, May, $1.10.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.48	$0.45	$0.37	$0.37
February	.45	.45	.37	.37
March	.45	.40	.37	.37
April	.40	.40	.37	.37
May	.40	.40	.38	.38
June	.40	.40	.38	.38
July	.40	.38	.38	.38
August	.38	.38	.39	.38
September	.37	.37	.39	.34
October	.37	.37	.39	.39
November	.37	.37	.43	.41
December	.39	.37	.43	.43
Year	.48	.37	.43	.37

Zinc, Carbonate

On October 18, 1871, the price was 29c. per pound; 1881, 34c.; 1891, 27c.; 1901, 19c.; 1911, 7¼c.; 1913, 9c.; 1918, January, 20c.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.18	$0.18	$0.14	$0.14
February	.16	.16	.14	.14
March	.16	.15	.14	.14
April	.16	.15	.14	.14
May	.15	.15	.14	.14
June	.15	.15	.14	.14
July	.15	.15	.14	.14
August	.15	.15	.14	.14
September	.15	.15	.14	.14
October	.15	.15	.14	.14
November	.15	.15	.14	.14
December	.15	.15	.14	.14
Year	.18	.15	.14	.14

Zinc, Chloride, Fused

On October 18, 1871, the price was 10c. per pound; 1881, 10½c.; 1891, 8⅜c.; 1901, 6½c.; 1911, 4¼c.; 1913, 4½c.; 1917, May, 17c.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.12	$0.12	$0.05	$0.05
February	.12	.11	.05	.05
March	.08	.08	.05¼	.05
April	.11	.11	.05¼	.05¼
May	.11	.11	.05¼	.05
June	.11	.10	.05¼	.05¼
July	.08½	.08	.05¼	.05
August	.08	.08	.05	.05
September	.08	.08	.05	.05
October	.08	.04¾	.07	.05½
November	.05½	.05½	.05½	.05½
December	.05½	.05	.05½	.05½
Year	.12	.04¾	.07	.05

Zinc, Sulphate

On October 18, 1871, the price was 6c. per pound; 1881, 5¾c.; 1891, 4½c.; 1901, 5¼c.; 1911, 2¼c.; 1913, 2½c.; 1916, December, 7½c.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.03¼	$0.03¼	$0.03	$0.03
February	.03¼	.03¼	.03	.03
March	.03¼	.03¼	.03	.02¾
April	.03¼	.03¼	.02¾	.02¾
May	.03¼	.03¼	.02¾	.02¾
June	.03¼	.03¼	.02¾	.02¾
July	.03¼	.02¾	.02¾	.02¾
August	.02¾	.02¾	.02¾	.02¾
September	.02¾	.02¾	.02¾	.02¾
October	.02¾	.02¾	.02¾	.02¾
November	.03	.02¾	.02¾	.02¾
December	.03	.03	.02¾	.02¾
Year	.03¼	.02¾	.03	.02¾

Acids

Acetic, 28 Per Cent.

On October 18, 1871, the price was $1 per 100 pounds; 1881, $3.50; 1891, $1.50; 1901, $1.62; 1911, $1.69; 1913, $1.75; 1918, June, $12.

	Per 100 pounds 1921. H.	1921. L.	1922. H.	1922. L.
January	$2.75	$2.75	$2.50	$2.50
February	2.75	2.75	2.50	2.50
March	2.75	2.75	2.50	2.50
April	2.50	2.50	2.50	2.35
May	2.50	2.50	2.35	2.25
June	2.50	2.50	2.25	2.25
July	2.50	2.50	2.67½	2.25
August	2.50	2.50	2.67½	2.67½
September	2.50	2.50	2.80	2.67½
October	2.50	2.50	2.80	2.80
November	2.50	2.50	3.17	2.80
December	2.50	2.50	3.17½	3.17½
Year	2.75	2.50	3.17½	2.25

Acetic, Glacial, 99 Per Cent.

On October 18, 1871, the price was $1.15 per 100 pounds; 1881, $8; 1891, $5.50; 1901, $4; 1911, $8.50; 1913, $8; 1918, May $42.

	Per 100 pounds 1921. H.	1921. L.	1922. H.	1922. L.
January	$10.87	$10.87	$10.00	$9.50
February	9.00	9.00	9.50	9.50
March	10.00	9.00	9.50	8.50
April	9.35	8.50	8.50	8.50
May	9.50	9.35	8.50	8.50
June	11.50	11.00	8.50	8.50
July	10.00	9.00	10.07	8.50
August	10.00	9.00	10.07	10.07
September	10.00	10.00	10.71	10.07
October	10.00	10.00	10.71	10.71
November	10.00	10.00	12.05	10.71
December	10.00	10.00	12.05	12.05
Year	11.50	8.50	12.05	8.50

Battery, 66 Degree, Sulphuric

On October 18, 1871, the price was $2.25 per 100 pounds; 1881, $1.22; 1891, 85c.; 1901, $1.20; 1911, $1; 1913, $1; 1918, September, $9.

	Per 100 pounds 1921. H.	1921. L.	1922. H.	1922. L.
January	$1.75	$1.75	$1.50	$1.50
February	1.75	1.75	1.50	1.40
March	1.75	1.75	1.40	1.30
April	1.75	1.75	1.30	1.25
May	1.75	1.75	1.25	1.25
June	1.75	1.50	1.25	1.25
July	1.50	1.50	1.30	1.30
August	1.50	1.50	1.25	1.25
September	1.50	1.50	1.25	1.25
October	1.50	1.50	1.25	1.25
November	1.50	1.50	1.25	1.25
December	1.50	1.50	1.25	1.25
Year	1.75	1.50	1.50	1.25

Boric

On October 18, 1871, the price was 75c. per pound; 1881, 15c.; 1891, 13½c.; 1901, 10¾c.; 1911, 7c.; 1913, 7c.; 1919, December, 14½c.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.15¼	$0.14¾	$0.12½	$0.12½
February	.15¼	.14½	.12½	.12½
March	.13	.13	.12½	.11
April	.13	.13	.11	.11
May	.13	.13	.11	.11
June	.13	.13	.11	.11
July	.13	.13	.11	.11
August	.13	.12½	.11	.11
September	.12½	.12½	.11	.11
October	.12½	.12½	.11	.11
November	.12½	.12½	.11	.11
December	.12½	.12½	.11	.11
Year	.15¼	.12½	.12½	.11

Citric, Crystals

On October 18, 1871, the price was 80c. per pound; 1881, 63c.; 1891, 42c.; 1901, 36c.; 1911, 38½c.; 1913, 55c.; 1918, December, $1.25.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.55	$0.47	$0.43	$0.42½
February	.47	.47	.44	.43
March	.47	.47	.44	.44
April	.47	.47	.45	.44
May	.48	.47	.44½	.44½
June	.45	.43	.44½	.44¼
July	.45	.43½	.45	.44
August	.43½	.43½	.44	.44
September	.43½	.43½	.50	.44
October	.44	.44	.50	.50
November	.44	.44	.50	.50
December	.44	.43	.50	.50
Year	.55	.43	.50	.42½

Muriatic, 22 Degrees

On October 18, 1871, the price was $3 per 100 pounds; 1881, $1.80; 1891, $1.20; 1901, $1.50; 1911, $1.45; 1913, $1.45; 1916, June $5.

	Per 100 pounds 1921. H.	1921. L.	1922. H.	1922. L.
January	$2.50	$2.50	$1.50	$1.50
February	2.50	2.50	1.50	1.50
March	2.50	2.50	1.50	1.40
April	2.00	2.00	1.40	1.40
May	2.00	1.50	1.40	1.40
June	1.50	1.20	1.40	1.35
July	1.20	1.20	1.35	1.35
August	1.40	1.40	1.40	1.40
September	1.40	1.40	1.40	1.40
October	1.50	1.50	1.40	1.40
November	1.50	1.50	1.75	1.40
December	1.50	1.50	1.75	1.75
Year	2.50	1.20	1.75	1.35

Formic

In 1911 the price was 11c.; October 18, 1913, 14@14½c.; 1918, January, 36c.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.18	$0.18	$0.16	$0.16
February	.18	.18	.16	.16
March	.18	.17	.16	.16
April	.17	.16	.16	.16
May	.16	.16	.18	.18
June	.18	.17	.18	.18
July	.18	.18	.18	.18
August	.18	.18	.19	.18
September	.18	.18	.19	.19
October	.18	.18	.19	.18
November	.18	.18	.18	.18
December	.18	.18	.18	.15
Year	.18	.16	.19	.15

Nitric, 42 Degrees

On October 18, 1871, the price was $13 per 100 pounds; 1881, $8.25; 1891, $4.25; 1901, $4.50; 1911, $4.80; 1913, $4.50; 1917, October, $10.70.

	Per 100 pounds 1921. H.	1921. L.	1922. H.	1922. L.
January	$7.50	$7.50	$6.50	$6.50
February	7.50	7.50	6.50	6.50
March	7.50	7.50	6.50	6.50
April	7.25	7.00	6.50	6.50
May	7.25	7.00	6.50	6.50
June	7.00	7.00	6.50	6.50
July	7.00	7.00	6.50	5.50
August	7.00	7.00	5.50	5.50
September	7.00	7.00	5.50	5.50
October	6.75	6.75	5.50	5.50
November	6.75	6.75	5.50	5.25
December	6.75	6.75	5.25	5.25
Year	7.50	6.75	6.50	5.25

Oleum, 20 Per Cent.

On October 18, 1871, the price was $25 per ton; 1881, $15; 1891, $22; 1901, $36; 1911, $22; 1913, $25; 1918, November, $29.50.

	Per ton 1921. H.	1921. L.	1922. H.	1922. L.
January	$22.00	$22.00	$21.00	$21.00
February	22.00	22.00	21.00	19.50
March	22.00	22.00	19.50	19.50
April	22.00	22.00	19.50	19.50
May	22.00	22.00	19.50	19.50
June	22.00	22.00	19.50	19.50
July	21.00	21.00	19.50	19.50
August	21.00	21.00	19.50	19.00
September	21.00	21.00	19.00	19.00
October	21.00	21.00	19.00	17.50
November	21.00	21.00	17.50	17.50
December	21.00	21.00	17.50	17.00
Year	22.00	21.00	21.00	17.00

Oxalic

On October 18, 1871, the price was 25c. per pound; 1881, .09¾c.; 1891, .06⅞c.; 1901, .05c.; 1911, .07½c.; 1913, .07½c.; 1916, March, .80c.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.25	$0.18	$0.14	$0.14
February	.18	.16	.14	.12
March	.16	.16	.14	.11½
April	.16½	.16	.11½	.11½
May	.16½	.16	.14	.12
June	.18	.17	.14½	.14
July	.18	.18	.14½	.14½
August	.17¼	.16	.16	.16
September	.16	.15½	.17½	.17
October	.16	.15	.17	.15
November	.14½	.12½	.15	.14
December	.14	.14	.14	.14
Year	.25	.12½	.17½	.12

Tartaric, Crystals

On October 18, 1871, the price was 50c. per pound; 1881, 42c.; 1891, 33c.; 1901, 28c.; 1911, 30¼c.; 1913, 31¼c.; 1919, April, 83c.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.48	$0.39	$0.25	$0.25
February	.39	.39	.25	.25
March	.39	.39	.25	.25
April	.36	.34	.25	.25
May	.34	.34	.27	.25
June	.33	.30	.29	.28½
July	.28	.27	.29	.28
August	.27½	.26¾	.28	.28
September	.26¾	.25	.31	.28
October	.26	.26	.30½	.28
November	.26	.25	.30	.30
December	.25	.25	.30½	.30
Year	.48	.25	.31	.25

Sulphuric, 66 Degrees

The price in 1871 was $25 per ton; 1881, $10; 1891, $17; 1901, $27; 1911, $20; 1913, $20; 1916, January, $60.

	Per ton 1921. H.	1921. L.	1922. H.	1922. L.
January	$19.00	$18.00	$16.00	$16.00
February	23.00	21.00	16.00	16.00
March	21.00	21.00	17.00	16.00
April	19.00	19.00	17.00	17.00
May	19.00	19.00	17.00	16.00
June	19.00	18.00	16.00	16.00
July	18.00	18.00	16.00	14.00
August	18.00	18.00	14.00	14.00
September	18.00	18.00	14.00	14.00
October	17.00	17.00	14.00	14.00
November	17.00	17.00	14.00	14.00
December	17.00	17.00	14.00	14.00
Year	23.00	17.00	17.00	14.00

Tannic, U. S. P.

The price in 1871 was $1.40 per pound; 1881, $1.45; 1891, $1.05; 1901, 65c.; 1911, 58c.; 1913, 54c.; 1918, July, $1.53.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$1.20	$1.20	$0.65	$0.65
February	1.20	1.20	.65	.60
March	1.20	1.20	.65	.65
April	1.00	.90	.65	.65
May	.90	.90	.70	.65
June	.90	.90	.75	.70
July	.90	.85	.75	.75
August	.85	.80	.75	.75
September	.80	.80	.75	.75
October	.80	.80	.75	.75
November	.80	.75	.80	.75
December	.75	.75	.80	.80
Year	1.20	.75	.80	.60

Soda Silicate as Detergent and Adhesive

Although silicate of soda is widely used in detergent processes, little is known of its value therein. Detergent action, says William Stericker (Journ. Ind. Eng. Chem.), appears to be based on (1) emulsification, (2) wetting, (3) lubrication, (4) deflocculation, (5) solution, and (6) lathering. Alkaline salts are known to aid in washing. Since silicate of soda is more expensive than some of these, it must have certain advantages if its use is to be justified. Experiments with unsaponifiable and saponifiable oils show that certain silicates have emulsifying power and that they aid emulsification with soap to a greater extent than sodium carbonate does. They also aid in lathering to a greater extent. Laundry tests showed that $Na_2O.3.3SiO_2$, either alone or with soap, could be used to wash very greasy, dirty overalls.

The possible advantages of sodium silicate in soap are reported by A. S. Richardson (Journ. Ind. Eng. Chem.), under the following headings: water-softening action, detergent action without admixture of soap, and effect on emulsification power of soap. The soap-sparing effect of sodium silicate varies with the conditions of its use, being most pronounced at high temperature and in hard water high in magnesium salts, under which conditions the amount of soap conserved may be more than the chemical equivalent of the sodium silicate used. Sodium silicate has probably no detergent action when used without soap, except so far as free fatty acid is present in the wash. Sodium silicate increases the emulsifying power of soap solutions, as shown by the drop number of the solution toward a mineral oil.

Sodium silicate solutions can be prepared to meet all the requirements of a good adhesive, is the conclusion of Rex Furness (Journ. S. C. I.). They are superior to animal and vegetable adhesives in that they are fire-resisting, do not become rancid, and are vermin-repellent. Silicate adhesives are quite odorless, and produce damp-proof articles, they have a relatively high bond strength, and their setting times can be varied over a wide range. They are ever-ready, requiring no heat before or during application, and they give consistent results. The apparatus required for their application to wood, paper, etc., is extremely simple.

Dead Sea as Chemical Source

Negotiations were reported last year to be in progress between the Jewish Agency and the Colonial Office regarding a concession for the exploitation of the mineral wealth of the Dead Sea. There was opinion that the project would probably even surpass the Rutenberg scheme in developing the commerce, industry, and wealth of the country east and west of the Jordan.

The Dead Sea occupies the lowest and deepest end of the El-Ghor. This valley lies below sea-level almost along its whole length. To the west and east it is bordered by chains of steep and high mountains. If access is difficult from the west and east, it is quite easy from the north and south.

The water of the Dead Sea is greenish, looks oily and tastes bitter and salty. Its specific gravity is considerably greater than that of any known natural waters. This is due to the fact that large quantities of different salts are dissolved in the Dead Sea. Apart from other substances, traces of carbonate of calcium, asphalt, and iodine have been found. The Dead Sea contains about 34,000,000,000 tons of various salts. Of this quantity about 12,500,000,000 tons consist of common salt and 15,500,000,000 tons of chloride of magnesium.

There is a vast possibility of utilizing the oasis of Ain el Feshka as a base for industrial activities on the shores of the Dead Sea. This oasis occupies an exceptionally favorable position, being well watered, having a high range of mountains near by, where a village or villages could be built, and being much nearer to Jerusalem than any other spot on the Dead Sea.

Japan's Caustic-Soda Trade

The liquidation of post-war accumulations and purchases abroad in 1921 but 6 per cent. of normal caused Japan's imports of caustic soda in 1922 to mount to 46,504,130 pounds, reports Commercial Attache James F. Abbott, Tokyo. In the preceding year imports had totaled 2,899,200 pounds; in 1920, 58,554,400 pounds.

A feature of the 1922 trade was the predominant place occupied by Great Britain. In 1920 that country had supplied 11,645,721 pounds, or 20 per cent., of Japan's total imports of caustic soda, and in 1921 387,334 pounds, or 13 per cent.; whereas in 1922, 29,689,465 pounds, or 64 per cent. of the year's imports, came from the United Kingdom. This British gain has been at the expense of the United States, whose share in the trade has dropped from 46,272,827 pounds, or 79 per cent., in 1920 to 16,808,265 pounds, or 36 per cent., in 1922. Germany contributed 6,400 pounds during 1922.

The Japanese annual production of caustic soda is about 35,000,000 pounds. The price has been falling in recent years; in December, 1919, it was 17.50 yen per 100 pounds, and at the close of 1922 it averaged about 9.30 yen. The increase in imports from Great Britain is due to the undercutting of the American price by British dealers in Japan.

Sulphur Dioxide from Sulphates

According to a process described in Germany (Zeit. f. angew. Chem., 125; 307) sulphur dioxide gas is easily obtained from alkaline earth sulphates. This is accomplished by the action of iron, reducing the sulphates first to sulphides, at a temperature considerably lower than that required for the reduction when carbon is used as the reducing agent. When gypsum is used the temperature is 750 deg. C.; with strontium sulphate, it is 850 deg. C.; while with heavy spar it is 950 deg. C. The reduction is complete within half an hour at the maximum.

The best yield of sulphur dioxide is obtained when calcium sulphate is used in a mixture, containing 15 parts of the latter and 16 parts of iron. The yield is 80 per cent. of theoretical under these conditions, while from a mixture containing 9 parts of strontium sulphate to 8 parts of iron a yield of 88.9 per cent. of the theoretical is obtained.

Pyrites, mixed with iron oxide, can also be used for the production of sulphur dioxide from alkaline earth sulphides. Besides sulphur dioxide, elemental sulphur is obtained as well.

Coal Tar Products: Market Review

The year 1922 will ever be memorable in the eyes of the coal tar products industry as one of storm and stress. Vicissitudes which beset the producer of basic products and the manufacturer of intermediates and colors were not ended even by the passage of the new tariff bill and its going into effect September 21. The coal tar industry had fought for such a protective tariff for years; but, alas, it did not turn out the panacea that was hoped.

There was scarcity of crudes all through the year. Producers at no time got ahead of demand, and for the most part were behind on deliveries. Demand for motor spirits was so great that it resulted in overselling of that grade of benzol, hence there was nothing left for refining purposes, and toluene, xylenes and solvent naphtha were well-nigh unobtainable. The prices of all these materials were advanced the first week of the year, and, as far as producers were concerned, those prices were maintained with practically no changes until December. They applied, of course, on forward deliveries and were the prices at which contracts were taken. At no time during the year were there ready supplies; first hands were unable to accept any business for immediate shipment; everything was sold for forward distribution. After a time even that could not be managed. This condition of affairs was modified to some extent by the stocks dealers had managed to accumulate. It was on this resale material that occasional consumers had to depend. Needless to say, dealers made as much hay while the sun shone as they could, and prices ruled extremely high. Dealers frequently asked a premium of 15c. per gallon for spot goods. This condition of affairs endured during the first quarter.

By that time, with nothing reaching the general market from first hands, and consumers absorbing everything that came their way and asking for more, which makers could not give them, as all the best efforts of production failed to do more than take care of the contract holders and a part of the export business, the problem of supplies became serious. There were large sales of 90 per cent. benzol for foreign account, but the dissatisfaction caused by this policy (the export was much better than the domestic price) resulted in producers refusing further export business. The nature of stocks also caused a halt in this foreign business. Resale material was exhausted and there was absolutely nothing available. Demand was at the height and only those few who had contracts could be sure of getting supplies, and that not always in as great a volume as they would have liked.

Curtailment by Coal Strike

In April the coal strike was inaugurated. The strike lasted all summer and into the fall. During that time there was practically no anthracite coal mined in the principal colleries. At first producers of benzol and other crudes presented a smiling face to their adversity, but it was not long before a marked decrease in production was observed, brought about solely by the coal shortage following after a few months of the strike. Throughout all this difficult period there were no changes in producers' quotations. Since everything was sold on contract and deliveries were as they could get the goods, there was no object in any alteration of the schedule. By the first of September there was not a gallon of benzol to be had in the open market. Cresylic acid, cresol, solvent naphtha, toluene and xylene were almost equally scarce.

In September the tariff bill was passed and went into effect on the 21st. The effect on the coal tar products market was strengthening at first, but the operation of the bill was such as to cause serious reflection on the part of those most deeply interested. The valuation clause caused most trouble, but there were various other phases of the new bill that were sufficient to delay and hinder any effort to readjust the industry on a basis of the new factor. The basis admitted of so many interpretations, or at least was so complicated in its working out—and also so obscure—that it made a piece of honeycomb look like a solid brick.

And among other things, the new tariff bill resulted in the practical prohibition of importation of cresylic acids and phenol. The high duties which had to be added to the cost of these important items brought the selling levels up so much that consumers could not afford to purchase them. The inclusion of these in the tariff act was in the face of much opposition. It was thoroughly understood that neither was produced in sufficient quantities in this country to take care of domestic demand. Cresylic acid has never been made in America in anything like adequate volume to take care of the domestic requirements. Consumers have always relied on importations from England. That country has for many years produced enormous quantities of cresylic and phenol which has met with favor from domestic consumers.

In explanation of the dilatoriness of Americans in producing the cresylic acids, it may be said that it could be made cheaper in England and sold at a price here at which domestic producers could not duplicate it. The plants required for distillation are also very expensive affairs, costing anywhere from a quarter to half a million dollars to equip properly.

Consumers were forced to pay higher prices than ever before for cresylics. Eventually, with domestic producers unable to do anything to relieve the situation, consumers had to buy imported, plus all the duties and charges under the new tariff. Derivatives inevitably advanced. The same applied to phenol, and by the middle of November the market was established at prices equal and above those that prevailed during the times of greatest stringency during the war. Even in those days 40c. was an extraordinarily high price. Manufacturers instituted it as their selling price, but resale material kept the market inside at 35c. There was speculation enough to remind one of war times

Tariff Classification Puzzle

To return to the tariff, by the end of the year it had not been figured out exactly how the provisions in the intermediate and dyestuffs section were to be interpreted. Aside from the difficulties presented by the specific colors, the classification of intermediate and dyestuff created difficulties the framers of the act probably never dreamed of. One of those problems was the limitation to be placed upon the term "intermediate." That is, when does an intermediate cease being such and become a dyestuff product? In the case of many intermediates there can be no question. For instance, aniline oil, toluidine, diethylaniline, benzidine and such like could never be anything else but intermediates. But the case of others is less simple. Michel's ketone, for instance, can readily be converted in certain dyes, such as auramine. A manufacturer of that color or Victoria blue, another derivative, who had to make his own ketone would naturally have higher production costs than one who imported the ketone from a low priced source and had only to convert it into the color. The case of rhodamine red has also been cited. It is made from a derivative of diethyl-aniline. This intermediate is difficult to handle and is an expensive proposition for the domestic producer, who has to combine it with other intermediates to produce the result. If it could be obtained cheaply from a foreign source and imported a material reduction in the price of the color could be effected.

It was plain to even the casual observer that manufacturers who had foreign connections might have available a relatively cheap source of the higher intermediates which had been brought in their development almost to the dyestuff stage and consequently would occupy a much more advantageous position than other manufacturers who would have to rely on building up these intermediates themselves or who depended on an American source of supply at a higher price. It has been decelared that an intermediate is a product which cannot be directly employed by the dyer for producing the dye color, whereas the dyestuff is a material employed directly by the dyer for the actual production of the color. But the trade found many debatable points in that classification. Even before 1914 it was the custom of the larger dyestuffs users in this country to import certain intermediates from abroad and convert them into the dyestuff at the dyehouse, using the finished dyestuff in solution instead of going to the trouble and expense of salting it out and drying it. The problem was meeting serious consideration from the industry, for it was pointed out that everything might have the most serious effects.

Benzol Short of Demand

The story of benzol during 1922 is pretty much the story of all the crudes. The entire year was characterized by extreme scarcity of supplies, inability of producers to supply consumers adequately, and practically complete exclusion of resale material. This great scarcity was brought about by a number of reasons, not the least of which was the enormous demand in the preceding fall, which persisted into the summer; later in the year the prolongation of the coal strike had a serious effect in cutting down production to even less inadequate volume than it had been during the first six months.

It will be recalled that late in 1921 a demand for motor spirits arose. This demand came principally from England and Continental countries. It was extremely heavy at the time, and as prices realized on such business were attractive, American producers went in largely for that business. That resulted in over selling of the unrefined spirits. This left little benzol on hand for refining purposes and consequently the benzol derivatives (toluene, xylene, naphthas) were automatically lessened, while there was no decrease in demand. At the beginning of 1922 supplies were practically all taken up on contract, sales of the 90 per cent. benzol were distorted so that the rest of the list was out of balance. The first week of the year saw a sharp advance in the prices of benzol; but, despite vicissitudes, that price was maintained until December. There were no changes in prices; but, then, there was no benzol available in the open market. The little producers had was sold on contract. Demand was sufficiently great to absorb every increase in production. Besides that, delays and various other reasons had caused producers to get behind on deliveries and trying to catch up on them took any infinitesimal surplus that accumulated.

The coal strike was launched in April and lasted until October. At first it was not thought there would be much affect exerted on the production of coal-tar distillates. After a couple of months, however, the shortage of coal was felt. Production dropped to about 20 per cent. of normal during September. Consumers were wild for supplies, but there was nothing doing. The market never recovered from the hindrances, and supplies at the end of 1922 were as short and as difficult to obtain as at the beginning.

The fact that cresylic acid could be obtained abroad and imported into this country without undue difficulty resulted in a more or less steady supply throughout the first nine months of the year. That discounted the inability of domestic producers to supply consumers' requirements. But when the new tariff went into effect the foreign source was shut off immediately and prices advanced correspondingly. The inclusion of cresylic acid in the tariff bill was against much opposition. There has never been enough produced in this country to supply the demands of domestic consumers. There are not enough plants equipped to produce and the ease with which foreign supplies could be obtained has always discouraged American endeavor in that direction. It was possible to import the English at a cheaper price than it was possible to manufacture in America. Speculators rushed in supplies before the final passing of the new tariff and prices advanced to $1 per gallon by December. That price was too high for many, but there was no alternative but to pay it.

Some plans were afoot for the erection or conversion of plants for the manufacture of cresylic toward the end of the year, but the outlook was not considered sufficiently cheerful to result in much strenuous activity in that direction. The cost of a cresylic plant, properly equipped to take the tar through the various stages and to utilize the by-distillates, is around $250,000 to $500,000. To sink such a sum of money in a plant that might be worthless after a few years was regarded as foolish at best and something else at worst.

Speculation in Phenol

Phenol developed into one of the biggest speculative items in the market. In August the government surplus stock, which had been selling ever since the war at 12c. per pound, was declared exhausted. Sales of several million pounds to one large corporation finally removed these goods. Resale material at best was not plentiful. Producers—as a matter of fact, there was only one who produced any quantity worth reckoning with—had none available aside from regular deliveries to contract holders. The market advanced rapidly until 35c. was reached, when a halt was called. That was the price it cost to import from England. Needless, to say, practically all the goods available during the last quarter of the year were of English origin.

Demand for naphthalene during February and March was enormous. Production was stimulated to an extent hitherto unknown in this country. During March demand slumped abruptly, producers were left with stocks of flakes and balls. The spring season ended disastrously. It had been expected that there would be a big consumption, and from the way things developed at the beginning of the season factors had every evidence such was going to be the case. But after production was stimulated, after supplies had been accumulated in order to meet this demand, it did not materialize and factors were left stranded with large stocks on hand and no apparent outlet. The market was a namby-pamby affair all through the summer and fall. There was no buying at all during the winter months, even intermediate makers were out of the market. The year closed with prices at the low.

The record of prices of intermediates is one of declines. It was only toward the end of the year that any firmness at all developed in these items. The firmness then did not result in many advances in prices, but rather in a halting of the declining tendency. It was brought about by the higher prices then prevailing for different basic products, such as phenol, toluene and the scarcity of benzol. Aniline oil, which sold below the cost of production during the first part of the summer, recovered and was firm because there was so little benzol available for making it. Technical resorcinol pursued a checkered career, the final firmness and advances in prices being due to the absence of low priced phenol. Salicylic acids were also higher at the end of the year for the same reason. Dimethyl-aniline, which is largely made of alcohol, was influenced by that product in its various fluctuations.

Coal Tar Colors

The ultimate desire of all those connected with the production of aniline dyes in America during the past several years has been to see the industry firmly established on a sound foundation. That hope seemed about to be gratified when the new tariff bill made its appearance in its last form. The passage of the bill last September was regarded as a signal victory for the dyestuffs industry of this country. Unfortunately, the application of the new regulations governing the importation of aniline colors and coal tar products in general was found to entail great difficulty. Lawyers, chemical experts, customs authorities and a host of others familiar with the industry and the operation of the law were drawn into conference after conference convened to find some way to simplifying matters. The American valuation factor, the competitive nature of the product and a hundred other details had to be studied.

That is why the American dyestuffs situation was so upset at the end of 1922. The year had been one of vicissitudes. The great victory (the tariff) had been achieved; but, for the industry as a whole, the fog enveloping its administration had not been penetrated by any illuminating sun three months after it had come into force. During that time the customs department had experts at work, dye manufacturers also had experts at work, and there was little doubt that some of the big consumers were also employing investigators. Even at that, the situation was shrouded with uncertainty, the paralyzing sort. As far as an actual stabilization of the industry went, to the casual observer it did not appear that the American aniline color industry was one whit more agreeably placed than it had been at the close of the previous year.

For the past five years everybody connected with the manufacture, importation and marketing of dyes has been in a quandary. The consumer has also been in a dilemma, as could only be expected in such an unsettled condition as existed. The position of the consumer at the end of 1922 was particularly deplorable in view of the fact that the textile and leather trades had both shown a splendid gain in volume of activity. The improvement was natural and had the appearance of complete normality. The position of the color manufacturer was such as to cause much regret. Factors were afraid to commit themselves wholly, not trusting the future. At the same time, this inability to abandon themselves to full and energetic endeavor was a marked depressant.

The trend of prices in aniline colors throughout 1922 was steadily downward. Prices were anywhere from 5 to 50 per cent. lower at the end of the year than at the beginning. The biggest declines were in some of the more difficult and rare colors. Thus, patent blue was selling in December at half the price of January. In sulphur colors and some of the commoner acid and basic ones the changes were very slight indeed; a few were unaltered. Producers endeavored to supply colors for delicate shades that had formerly been imported from Germany, which accounts for the declining prices of some of the list.

The year was lean in every way. Production was maintained about as during the previous year, but the industry was entirely routine in character and there was little of expansion in any section of it. The first half of the period was spent anticipating the tariff bill and in efforts to get it through Congress successfully. The last quarter of the year was spent in trying to straighten out the tangle that was caused by the conditions of the tariff. The trade was between two fires and, under the circumstances, little of a definitely constructive nature was accomplished.

German Dyes From Reparations Sources

In order to get a true picture of the situation with respect to the importation, sale and distribution of reparation dyes in this country during the year 1922 it would seem necessary to recall to mind the conditions which obtained during the latter part of the year 1921; and to point out the change which took place in December of that year and the further change which occurred in January, 1923.

In October, 1919, and in April, 1920, the Department of State entered into arrangements with the Textile Alliance, Inc., New York, an organization representative of textile manufacturing interests, whereby the alliance was authorized to order, import, sell and distribute certain impounded German reparation dyes which had been allocated by the allied authorities for the benefit of consumers in this country. July 30, 1920, a third and final arrangement with the alliance was consummated, under the terms of which the alliance was authorized to order, import, sell and distribute this country's portion of a second and last pool of impounded dyes and also dyes which might be obtained from time to time through the Reparation Commission from the daily production of the German factories during the five-year period ending January 1, 1925 (this although the treaty of Versailles had not been ratified by the Senate of the United States).

It was a part of this arrangement with the alliance, however, that the Department of State reserved the right to abrogate it at any time with respect to dyes to be obtained from this daily production of the German factories, but without prejudice to anything to which the Textile Alliance should at that time (of abrogation) be committed.

This arrangement apparently worked to the satisfaction of all parties concerned and it remained in effect until the end of December, 1921. December 14, 1921, the Department of State, actuated, it would seem, by questions of internal policy, for it was stated that the action was not due to dissatisfaction with the conduct of the affairs of the Textile Alliance, addressed a letter to the Textile Alliance, advising it that the department was of the opinion that this arrangement under which the Textile Alliance, Inc., had been purchasing dyestuffs from the Reparation Commission at Paris and distributing them here should be terminated. The department stated further, however, that it had no objection to the purchase of dyestuffs from the Reparation Commission by the Textile Alliance or other non-profit making American organizations.

In effect, it appears, therefore, that the department by this action withdrew its direct authorization to the alliance to obtain this country's quota of dyes from the Reparation Commission and substituted therefor a mere permissive authorization which depended for its force solely upon the good will of the Reparation Commission toward the Textile Alliance.

Others Get Permits

This action by the department was made public, and it is understood that a number of commercial importers asked the department to give them the same permissive authorization that it had given the alliance. This the department did, irrespective of the fact that these importing concerns were not in any way nonprofit making American organizations, but were avowedly in the business of importing for the profit which would accrue to them.

The Reparation Commission for more than two years had been dealing exclusively with the Textile Alliance and not with ordinary importers in so far as this country's quota of reparation dyes is concerned, and doubtless considered the alliance as the accredited agent of this government with respect to this particular matter. However that may be, the Reparation Commission continued to accept orders from and to deliver dyes to the alliance during the first part of 1922 and after the arrangement of July 30, 1920, had been terminated by the department's notification of December 14, 1921, as above stated. So far as is known, the Reparation Commission did not at any time deliver any reparation dyes to any of the ordinary importing agencies which had filed requests with the commission and as to which the department had stated that it, the department, had no objection to their becoming purchasers of such reparation dyes.

It should be pointed out in this connection that the Textile Alliance paid cash to the Reparation Commission for all dyes ordered by it. This was the only cash received by the Reparation Commission on reparation dye account, as the participating countries other than the United States received their quotas of dyes as reparations in kind. In addition, as stated above, the Textile Alliance had been ordering dyes for more than two years; also, the alliance had maintained an office in Paris, and had undoubtedly been of considerable service to the Dyestuffs Bureau of the Reparation Commission in the matter of furnishing technical information and advice. The foregoing may have had some bearing upon the decision of the Reparation Commission to continue to deliver dyes to the alliance subsequent to December 14, 1921.

During the first half of the year 1922 the Textile Alliance continued to order dyes from the Reparation Commission and the Reparation Commission continued to supply the Textile Alliance as in the past. It is possible that the Reparation Commission considered that the State Department's changed attitude in the matter, as evidenced by the department's letter of December 14, 1921, was dictated by internal policy and was a temporary measure pending a decision in the near future by the department and the United States Government as to whether or not this country could and would order reparation dyes on government account and would import, sell and distribute them through a government agency or at least under government auspices.

Alliance Stops Ordering

In July, 1922, the Textile Alliance announced through the medium of the public press that in view of the then existing conditions such as the impracticability of successfully operating without this government's support, the alliance would order no more dyes from the Reparation Commission and that they would proceed at once to liquidate their interest in reparation dyes remaining in their stocks or on order. This liquidation was incomplete at the end of the year 1922, although it is understood that at that time a relatively small amount of the alliance's stock of reparation dyes remained undisposed of.

Thus it would seem that while, December 14, 1921, the Department of State rescinded the arrangement of July 30, 1920, with the alliance, yet by the action of the Reparation Commission in continuing to accept orders from the Textile Alliance, there was no actual change in conditions as they affected the obtaining of reparation dyes by American consumers thereof during the first half of 1922. During that period the alliance accepted orders from consumers in this country for dyes and placed orders therefor with the Reparation Commission and these orders were filled by the commission. After July, 1922, however, conditions changed. At that time the alliance stated that they would place no more such orders with the commission and therefore, subsequent to that period, American consumers of dyes could obtain reparation dyes only if the Textile Alliance happened to have any stocks on hand or on order which were undisposed of.

That the Textile Alliance had any reparation dyes in reserve and was able, even partially, to fill consumers' orders during the latter part of 1922 was due mainly to the workings of the dye import control as administered first by the War Trade Board Section of the Department of State and later by the Dye and Chemical Section of the Treasury Department and to the method necessarily pursued by the Textile Alliance in ordering dyes through the Reparation Commission.

Import Control

The War Trade Board Section of the Department of State exercised an import control by license over dyes and certain chemicals from July 1, 1919, till May 28, 1921. On that date, May 28, 1921, the dye and chemical control act (title V of the emergency tariff act approved May 27, 1921) went into effect; the War Trade Board Section of the Department of State as such was abolished; the personnel, files and records were transferred to the Treasury Department and the same personnel, as the Dye and Chemical Section of the Treasury Department, administered the embargo feature of the dye and chemical control act, which in effect provided for an import control substantially the same as that formerly exercised by the War Trade Board Section of the Department of State.

According to the terms of this act, dyes and certain specified chemicals were prohibited importation into this country unless in any case the Secretary of the Treasury should determine that such an article or a satisfactory substitute therefor was not obtainable from domestic sources or if manufactured here that it was not obtainable on reasonable terms as to price, quality or delivery.

September 22, 1922, the current permanent tariff act became effective and the embargo type of control was superseded by the special provisions of this tariff act relating to dyes and chemicals under which any and all dyes could be imported irrespective of whether the same types of dyes or chemicals were made in this country or not, the principal protective provision with respect to the amount of duty to be assessed being dependent upon whether the dye or chemical sought to be imported is or is not competitive with a domestic made product.

Another fact which militated against the prompt importation and disposal of these stocks was that the sections of the tariff act of 1922, which dealt with dyes and coal-tar derivatives assessed duty on imports on the basis of so-called "American valuation." This method of assessing duties being new, the appraiser's office at New York experienced some difficulty in formulating proper regulations for administering this portion of the act, and as a consequence, during the latter part of 1922 importers, including the Textile Alliance, experienced considerable delay and difficulty in properly valuing and entering the goods consigned to them.

It would seem that when ordering dyes from the Reparation Commission the Textile Alliance was accustomed to place orders for those dyes for which they believed there would be a ready sale in this country and which, according to the best information obtainable by the alliance at the time of ordering, were types not manufactured in this country and for which permits to import would readily issue from the Dye and Chemical Seection of the Treasury Department. With respect to the quantity of each such dye they would order stocks estimated to be sufficient to meet the requirements of our consumers for at least a three months' period. That is, the Textile Alliance was compelled by force of circumstances to order dyes from the Reparation Commission prior to the receipt by it of corresponding orders from domestic consumers.

Entry Contingent on Sale

It is important to note in this connection that the Textile Alliance, though perhaps in effect acting in the capacity of a government agency, yet was amenable to exactly the same rules, regulations and restrictions as any ordinary commercial importer. These regulations provided that no application for permit to import any of the controlled commodities would be given consideration unless it was accompanied by a statement signed by a bona fide consumer of the article sought to be admitted that this article was for consumption in his manufacturing plant and the quantity so sought to be imported was not in excess of his next ensuing six months' requirements. Thus it is apparent that whereas the Textile Alliance might have placed an order with the Reparation Commission for 100 tons of various dyes, no part thereof could be admitted to entry or delivered from customs custody here until and unless the Textile Alliance had obtained a proper permit from the Dye and Chemical Section allowing such entry, and such permit would not issue until and unless the Textile Alliance had supplied the Dye and Chemical Section with a proper supporting statement from an actual consumer.

It has been stated above that nevertheless the Textile Alliance was compelled by force of circumstances and for the protection of the interests of the domestic dye consumers to order dyes in considerable quantities in advance of covering orders from consumers. The alliance was enabled to place with the Reparation Commission orders for particular dyes of desired types in considerable quantities, estimated to be sufficient to meet this country's requirements for a period of three or more months, by virtue of the terms of a protocol of convention between the Reparation Commission and the German Government, supplementary to annex 6, part 8, of the Treaty of Versailles. In the interest of clarity and in view of the fact that the terms of this protocol have had a very considerable effect upon the whole question of obtaining and importing reparation dyes, it would seem well to explain briefly the meaning of the protocol and its effect.

According to the terms of annex 6, part 8, of the Treaty of Versailles, Germany, amongst other items, accorded to the Reparation Commission an option on 25 per cent. of her production of dyes during the five-year period from January 1, 1920, to January 1, 1925, at a price, figured in (paper) marks,, which would be the lowest price at which each dye was sold in Germany, either for domestic use or for export. This 25 per cent. of Germany's production was from time to time allocated by the Reparation Commission to certain participating countries and each country was accorded by the Reparation Commission an option to purchase its quota of this 25 per cent. of each dye manufactured by the Germans at prices arrived at as above mentioned. In practice the Reparation Commission prepared monthly lists showing the amount of each dye manufactured by Germany, the amount covered by the 25 per cent. clause and the price per kilo.

Obviating German Shortage

Though not a party to the Treaty of Versailles the Government of the United States was included by the Reparation Commission as among those entitled to participate in the apportionment of these dyes. It early became apparent (in 1920, in fact) that Germany's production, particularly of certain of the most desired types, was not equal to her pre-war production and that the respective proportions of the several countries concerned were wholly insufficient to meet the requirements of the dye-consuming industries therein. In view of that condition a protocol between the Reparation Commission and the German Government, to relieve this situation to a certain extent, was entered into. According to the terms of this protocol each participating country was accorded the right to file with the German factories, through the Reparation Commission, an order for certain dyes in amounts which that country considered to be sufficient to meet the manufacturing requirements of the dye-using industries of that country for a particular period (three months). Germany agreed, in so far as possible, to supply these requirements, but reserved, and was accorded by the terms of the protocol, the right to charge a different and a higher price for any amount of any particular dye delivered to any participating country above the amount of that dye which the country would receive under the 25 per cent. clause of the treaty. As regards quantity, however, Germany was not required under the protocol to deliver to any country during any period a greater quantity of dyes in value than she would have been required to have delivered to that country under the treaty and during the same period.

It was by virtue of the terms of this protocol that the Textile Alliance could and did order considerable quantities of needed types of dyes in advance, and it was due to the fact that they were so ordered and that in actual practice a considerable quantity had of necessity to be manufactured by the Germans subsequent to the receipt of the orders by them that in certain instances some delay was experienced in the shipment of particular dyes from the German factories. Therefore, it would appear that at the time the Textile Alliance announced that no more dyes would be ordered by it from the Reparation Commission, it had a considerable quantity of dyestuffs already on order which were not shipped by the Germans until somewhat later in the year.

It is obvious that there are a number of reasons, principally economic, why a cutting off of supplies of reparation dyes for this country, such as was involved in the determination of the alliance to order no more dyes from the Reparation Commission under the arrangement above referred to, would naturally have been viewed with concern by the government and by domestic manufacturers who are consumers of dyes. Some of these economic reasons are stabilization of price and lower cost of dyes to the domestic consumer, particularly of types needed by him and unobtainable from domestic manufacturers of dyes, and stabilization of supply and assurance of source of supply; and so far as the government is concerned, the possible opportunity that it might give, if the importing should be done under government auspices, for applying amounts received from the sale of dyes in this country to recoupment in part of the cost of maintaining our troops on the Rhine after the armistice.

Government Distribution Proposed

September 26, 1922, it was announced by the Department of State in substance that the department had made inquiries abroad and had received certain assurances that if this government considered itself to be in a position to import, sell and distribute reparation dyes and would designate an agency to handle it, an arrangement could be made whereby the dyes themselves would be delivered to this government as part payment in kind of account of reimbursement for the expense incurred for the up-keep of our troops on the Rhine.

When this statement was first made to some it seemed to infer that the department had formulated a plan for importing and distributing reparation dyes and that the above statement was tantamount to an announcement that such a plan had been effected. However, further questioning elicted an explanatory statement from the department to the effect that this was not a fact; that no plan for handling reparation dyes in this country had as yet been decided upon, and that it was the opinion of the department that the importation, sale and distribution of reparation dyes here by the government or under government auspices could be accomplished only if authorized by an act of Congress.

In the early part of November, 1922, the department announced in this connection that it had obtained the services of F. S. Dickson, formerly the officer in charge of the War Trade Board section of the Department of State and later of the Dye and Chemical Section of the Treasury Department, to advise on this question. No further action was taken by the Department of State up to the end of 1922; that is, no legislation authorizing the department to obtain, import, sell and distribute reparation dyes to this country was suggested to Congress by the department or was enacted by Congress.

Early in January, 1923, there was a considerable change in conditions abroad, the French occupied the Ruhr district of Germany and as a consequence the Germans ceased making deliveries on reparation account, which, of course, included dyes. In the autumn of 1922, there was seemingly no question as to the ability of this country to obtain from the Reparation Commission a quota of reparation dyes on a theory similar to the one on which we had been privileged to participate before. The only question at hand was apparently as to whether or not the government or any branch of the government had sufficient authority to import, sell and distribute those dyes when they were obtained. The occupation of the Ruhr, however, and the subsequent refusal of the Germans to make deliveries on reparation account, changed the status of affairs entirely.

Dye Classification Lists Are Ready

Pursuant to the recently adopted rules interpreting the dye and organic chemical provisions of the 1922 tariff act, the appraiser at the port of New York has prepared a list of synthetic organic dyes, classifying them as competitive or noncompetitive with respect to domestic products.

This list is now ready for distribution. Copies may be obtained on application to the local appraiser's office.

There are 1,188 dyes in the list of competitive products, and 474 are listed as noncompetitive. The name of each dye is accompanied with the Schultz or Norton number and an index to the foreign producer. The list embraces the products of 50 manufacturers:—19 in Germany, 11 in England, 10 in France, 4 in Switzerland, 2 in Holland, and one each in Russia, Italy, Austria and Belgium.

Coal-Tar Products: Record of Prices

Acid, Benzoic, Technical

On October 18, 1871, the price was 30c. per ounce; 1881, 22c.; 1891, 8c.; 1901, 12½c.; 1911, 11¼c.; 1913, 23c. per pound; 1916, December, $9.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.65	$0.65	$0.60	$0.60
February	.58	.55	.60	.60
March	.55	.55	.65	.60
April	.55	.55	.65	.65
May	.55	.55	.55	.55
June	.55	.50	.55	.55
July	.50	.50	.55	.55
August	.50	.50	.60	.60
September	.50	.50	.70	.60
October	.50	.50	.70	.68
November	.50	.50	.68	.68
December	.50	.50	.72	.70
Year	.65	.50	.72	.55

Acid, Cresylic, 97@99 Per Cent.

In August, 1918, the price was $1.25 per gallon.

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.85	$0.80	$0.65	$0.65
February	.80	.80	.65	.65
March	.80	.80	.65	.65
April	.80	.80	.58	.56
May	.80	.80	.56	.56
June	.80	.75	.56	.56
July	.68	.68	.56	.56
August	.68	.65	.56	.56
September	.65	.65	.56	.56
October	.70	.70	.75	.56
November	.70	.70	.85	.85
December	.70	.70	1.00	.95
Year	.85	.65	1.00	.56

Acid H

In August, 1918, the price was $3.40 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.40	$1.25	$1.20	$1.00
February	1.30	1.20	1.00	1.00
March	1.20	1.20	1.00	.90
April	1.25	1.20	.90	.85
May	1.20	1.20	.85	.85
June	1.20	1.20	.80	.75
July	1.20	1.15	.80	.80
August	1.15	1.10	.80	.75
September	1.10	1.05	.75	.75
October	1.05	1.00	.75	.75
November	1.00	1.00	.75	.75
December	1.00	1.00	.75	.75
Year	1.40	1.00	1.20	.75

Phthalic Anhydride

In December, 1917, the price was $6 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.55	$0.50	$0.40	$0.40
February	.50	.50	.40	.40
March	.50	.50	.40	.35
April	.50	.50	.35	.35
May	.50	.50	.35	.35
June	.50	.50	.35	.35
July	.50	.45	.35	.35
August	.40	.40	.35	.35
September	.40	.40	.35	.35
October	.40	.40	.35	.35
November	.40	.40	.35	.35
December	.40	.40	.40	.35
Year	.55	.40	.40	.35

Acid, Picric

In August, 1881, the price was 45c. per pound; 1891, 52½c.; 1901, 40c.; 1911, 55c.; 1913, 50c.; 1916, May, $1.50.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.30	$0.30	$0.20	$0.20
February	.30	.30	.20	.20
March	.30	.30	.20	.20
April	.20	.20	.20	.20
May	.20	.20	.20	.20
June	.20	.20	.20	.20
July	.20	.20	.20	.20
August	.20	.20	.20	.20
September	.20	.20	.20	.20
October	.20	.20	.20	.20
November	.20	.20	.20	.20
December	.20	.20	.20	.20
Year	.30	.20	.20	.20

Acid, Salicylic, Technical

On August 1, 1881, the price was $1.40 per pound; 1891, $1.12; 1901, 39½c.; 1911, 32c.; 1913, 25c.; 1916, April, $4.25.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.25	$0.25	$0.22	$0.22
February	.25	.21	.24	.22
March	.21	.21	.24	.24
April	.23	.22	.26	.24
May	.22	.22	.24	.24
June	.22	.20	.24	.23
July	.20	.20	.25	.25
August	.20	.20	.26	.26
September	.20	.18	.26	.26
October	.18	.18	.29	.26
November	.18	.18	.37	.32
December	.20	.20	.37	.37
Year	.25	.18	.37	.22

Acid, Sulphanilic

In December, 1916, the price was 45c. per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.32	$0.31	$0.26	$0.26
February	.31	.31	.26	.26
March	.31	.31	.26	.24
April	.30	.30	.24	.24
May	.30	.30	.24	.22
June	.30	.28	.22	.22
July	.28	.27	.22	.22
August	.27	.27	.22	.22
September	.27	.27	.22	.22
October	.26	.26	.22	.20
November	.26	.26	.17	.17
December	.26	.26	.17	.17
Year	.32	.26	.26	.17

Alpha-Naphthol, Crude

In December, 1917, the price was $1.25 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.25	$1.25	$1.00	$1.00
February	1.20	1.20	1.00	1.00
March	1.20	1.20	1.00	1.00
April	1.15	1.10	1.00	1.00
May	1.10	1.10	1.00	1.00
June	1.10	1.10	1.00	1.00
July	1.10	1.10	1.00	.90
August	1.10	1.10	.87	.87
September	1.10	1.05	.87	.87
October	1.05	1.00	.87	.87
November	1.00	1.00	.87	.87
December	1.00	1.00	.87	.87
Year	1.25	1.00	1.00	.87

Alpha-Naphthylamine

In January, 1917, the price was $1.35 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.45	$0.40	$0.27	$0.27
February	.40	.40	.30	.27
March	.40	.40	.30	.30
April	.35	.35	.30	.30
May	.35	.35	.30	.30
June	.35	.35	.30	.28
July	.35	.35	.30	.30
August	.35	.33	.30	.30
September	.33	.32	.30	.28
October	.32	.27	.28	.28
November	.32	.30	.28	.27
December	.30	.27	.28	.27
Year	.45	.27	.30	.27

Aniline Oil

On August 16, 1881, the price was 26c. per pound; October 18, 1891, 25c.; 1901, 9c.; 1911, 10¾c.; 1913, 10½c.; 1916, December, 95c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.26	$0.20½	$0.17	$0.16
February	.22	.21	.16	.15½
March	.21	.20	.16	.15
April	.20	.18	.15	.15
May	.20	.20	.15	.15
June	.20	.20	.14	.12½
July	.18	.18	.14	.14
August	.18	.18	.14	.14
September	.18	.18	.16	.14
October	.18	.18	.16	.16
November	.18	.18	.16	.16
December	.18	.17	.16	.16
Year	.26	.17	.17	.12½

Aniline Salt

On August 16, 1881, the price was 36c. per pound; October 18, 1891, 21c.; 1901, 8¼c.; 1911, 9¼c.; 1913, 8⅝c.; 1916, December, $1.35.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.28	$0.28	$0.24	$0.24
February	.28	.28	.24	.24
March	.28	.28	.24	.22
April	.27	.25	.22	.22
May	.25	.25	.22	.22
June	.25	.25	.22	.22
July	.25	.25	.22	.22
August	.25	.25	.22	.22
September	.25	.25	.22	.21
October	.25	.25	.23	.21
November	.24	.24	.24	.24
December	.24	.24	.24	.24
Year	.28	.24	.24	.21

Anthracene, 80 Per Cent.

In December, 1919, the price was $1 per pound.

	Per pound			
	1921		1922.	
	H.	L.	H.	L.
January	$0.85	$0.80	$0.75	$0.75
February	.85	.85	.75	.75
March	.85	.85	.75	.75
April	.85	.85	.75	.75
May	.85	.80	.75	.75
June	.80	.75	.75	.75
July	.75	.75	.75	.75
August	.75	.75	.75	.75
September	.75	.75	.75	.75
October	.75	.75	.75	.75
November	.75	.75	.75	.75
December	.75	.75	.75	.75
Year	.85	.75	.75	.75

Beta-Naphthylamine, Technical

In January, 1918, the price was $2 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.40	$1.40	$1.00	$1.00
February	1.30	1.25	1.00	1.00
March	1.25	1.25	1.00	1.00
April	1.25	1.15	1.00	.95
May	1.25	1.15	.95	.95
June	1.15	1.15	.95	.95
July	1.15	1.15	.95	.95
August	1.05	1.05	.95	.95
September	1.05	1.05	.95	.95
October	1.05	1.05	.95	.95
November	1.05	1.05	.95	.95
December	1.05	1.00	.95	.95
Year	1.40	1.00	1.00	.95

Beta-Naphthol, Sublimed

In February, 1917, the price was $1.05 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.70	$0.70	$0.65	$0.65
February	.70	.70	.65	.65
March	.70	.70	.65	.50
April	.70	.70	.50	.50
May	.70	.70	.50	.50
June	.70	.70	.54	.50
July	.70	.70	.54	.54
August	.70	.70	.54	.50
September	.70	.70	.50	.50
October	.70	.70	.54	.50
November	.70	.70	.54	.54
December	.70	.65	.54	.54
Year	.70	.65	.65	.50

Beta-Naphthol, Technical

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.35	$0.35	$0.29	$0.28
February	.38	.32	.28	.27
March	.32	.31	.27	.26
April	.35	.34	.26	.25
May	.36	.34	.25	.25
June	.37	.36	.24	.23
July	.38	.34	.24	.24
August	.34	.33	.23	.22
September	.33	.32	.22	.22
October	.30	.29	.22	.22
November	.30	.29	.23	.22
December	.29	.28	.24	.24
Year	.38	.28	.29	.22

Benzaldehyde, Technical

In April, 1918, the price was $3.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.50	$0.45	$0.45	$0.45
February	.45	.45	.45	.45
March	.45	.45	.45	.45
April	.45	.45	.45	.45
May	.45	.45	.50	.45
June	.45	.45	.50	.50
July	.45	.45	.65	.55
August	.45	.45	.65	.65
September	.45	.45	.65	.65
October	.45	.45	.65	.65
November	.45	.45	.65	.65
December	.45	.45	.65	.65
Year	.50	.45	.65	.45

Benzidine Base

In March, 1917, the price was $2.10 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.95	$0.95	$0.95	$0.85
February	.95	.95	.95	.90
March	.95	.90	.90	.85
April	.90	.90	.85	.85
May	.90	.90	.85	.85
June	.90	.85	.85	.85
July	.85	.85	.80	.80
August	.90	.85	.80	.80
September	1.00	.90	.85	.80
October	1.00	.95	.85	.85
November	1.00	1.00	.85	.85
December	1.00	.90	.85	.85
Year	1.00	.85	.95	.80

Benzol (Benzene), 90 Per Cent.

In March, 1916, the price was 90c. per gallon.

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.28	$0.27	$0.27	$0.27
February	.27	.27	.27	.27
March	.27	.27	.27	.27
April	.27	.27	.27	.27
May	.27	.27	.27	.27
June	.27	.27	.27	.27
July	.27	.27	.27	.27
August	.27	.27	.27	.27
September	.25	.25	.27	.27
October	.25	.25	.27	.27
November	.25	.25	.27	.27
December	.27	.25	.27	.27
Year	.28	.25	.27	.27

Benzyl Chloride, 95@97 Per Cent.

In May, 1918, the price was $2.70 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.25	$0.25	$0.25	$0.25
February	.25	.25	.25	.25
March	.25	.25	.25	.25
April	.40	.40	.25	.25
May	.40	.40	.25	.25
June	.35	.35	.25	.25
July	.28	.25	.35	.25
August	.25	.25	.35	.35
September	.25	.25	.35	.35
October	.25	.25	.35	.35
November	.25	.25	.35	.35
December	.25	.25	.35	.35
Year	.40	.25	.35	.25

Creosote Oil, 25 Per Cent.

In July, 1918, the price was 55c. per gallon.

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.38	$0.38	$0.26¼	$0.26¼
February	.38	.38	.26¼	.24
March	.38	.36¼	.24	.24
April	.36¼	.36¼	.24	.23
May	.36¼	.36¼	.23	.23
June	.36¼	.31	.23	.23
July	.31	.31	.23	.23
August	.31	.30	.23	.23
September	.30	.30	.23	.23
October	.30	.30	.23	.23
November	.26¼	.26¼	.23	.23
December	.26¼	.26¼	.23	.23
Year	.38	.26¼	.26¼	.23

Cresol, U. S. P.

In January, 1917, the price was $1.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.17	$0.16	$0.14	$0.14
February	.17	.17	.14	.14
March	.17	.17	.14	.12
April	.16	.16	.12	.12
May	.16	.16	.12	.12
June	.14	.14	.12	.12
July	.16	.14	.12	.12
August	.16	.14	.12	.12
September	.14	.14	.12	.12
October	.14	.14	.14	.12
November	.14	.14	.14	.14
December	.14	.14	.14	.14
Year	.17	.14	.14	.12

Diethylaniline

In May, 1918, the price was $5.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.25	$1.20	$0.90	$0.90
February	1.20	1.20	.90	.90
March	1.20	1.20	.90	.50
April	1.20	1.20	.50	.50
May	1.20	1.20	.50	.50
June	1.20	1.20	.50	.50
July	1.20	1.20	.50	.50
August	1.20	1.20	.50	.50
September	1.20	1.20	.50	.50
October	1.00	1.00	.50	.50
November	1.00	.92	.50	.50
December	.92	.90	.50	.50
Year	1.25	.90	.90	.50

Dimethylaniline

In May, 1920, the price was $1.65 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.60	$0.55	$0.40	$0.40
February	.55	.50	.40	.38
March	.50	.50	.38	.38
April	.47	.45	.38	.36
May	.45	.45	.36	.36
June	.45	.42	.36	.34
July	.42	.40	.34	.32
August	.45	.40	.32	.32
September	.45	.40	.32	.32
October	.42	.40	.36	.32
November	.45	.42	.41	.36
December	.45	.40	.41	.41
Year	.60	.40	.41	.32

Dinitrobenzene

In September, 1917, the price was 50c. per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.25	$0.25	$0.21	$0.21
February	.25	.25	.21	.21
March	.25	.25	.24	.21
April	.25	.25	.24	.22
May	.27	.25	.22	.22
June	.27	.27	.22	.22
July	.23	.23	.22	.22
August	.23	.23	.22	.22
September	.23	.23	.22	.22
October	.25	.21	.22	.22
November	.21	.21	.20	.20
December	.21	.21	.20	.20
Year	.27	.21	.24	.20

Dinitrochlorbenzene

In January, 1917, the price was 55c. per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.24	$0.20	$0.20	$0.20
February	.20	.20	.20	.20
March	.20	.20	.22	.20
April	.20	.20	.22	.22
May	.20	.20	.22	.22
June	.20	.20	.22	.22
July	.20	.20	.22	.22
August	.20	.20	.22	.22
September	.20	.20	.22	.22
October	.20	.20	.22	.22
November	.20	.20	.22	.22
December	.20	.20	.22	.22
Year	.24	.20	.22	.20

Dinitronaphthaline

In February, 1917, the price was 80c. per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.33	$0.33	$0.30	$0.30
February	.33	.30	.30	.30
March	.30	.30	.30	.30
April	.30	.30	.30	.30
May	.30	.30	.30	.30
June	.30	.30	.30	.30
July	.30	.30	.30	.30
August	.30	.30	.30	.30
September	.30	.30	.30	.30
October	.30	.30	.30	.30
November	.30	.30	.30	.30
December	.30	.30	.30	.30
Year	.33	.30	.30	.30

Diphenylamine

In January, 1917, the price was $1.10 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.70	$0.65	$0.60	$0.60
February	.65	.65	.60	.60
March	.65	.65	.60	.58
April	.60	.60	.58	.57
May	.60	.60	.57	.57
June	.60	.60	.57	.57
July	.60	.60	.57	.55
August	.60	.60	.55	.55
September	.60	.60	.55	.55
October	.60	.60	.55	.52
November	.60	.60	.52	.52
December	.60	.60	.52	.52
Year	.70	.60	.60	.52

Nitrobenzene

On August 16, 1881, the price was 32c. per pound; October 18, 1891, 15c.; 1901, 7¾c.; 1911, 6⅝c.; 1913, 6½c.; 1917, February, 25c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.12	$0.12	$0.09½	$0.09½
February	.12	.12	.09½	.09½
March	.12	.12	.10	.09½
April	.12	.12	.09½	.09½
May	.12	.12	.09½	.09½
June	.14	.12	.10	.09½
July	.14	.12	.09½	.09½
August	.12	.12	.10	.09½
September	.12	.12	.10	.10
October	.12	.12	.10	.10
November	.10	.10	.10	.10
December	.10	.10	.10	.10
Year	.14	.10	.10	.09½

Metanitraniline

In December, 1917, the price was $1.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.90	$0.90	$0.85	$0.85
February	.90	.90	.85	.85
March	.90	.90	.85	.80
April	.90	.90	.80	.80
May	.90	.90	.72	.72
June	.90	.90	.72	.72
July	.90	.90	.72	.72
August	.90	.90	.72	.72
September	.95	.90	.72	.72
October	.95	.95	.72	.72
November	.95	.95	.72	.72
December	.95	.95	.72	.72
Year	.95	.90	.85	.72

Metanitroparatoluidine

In September, 1918, the price was $7 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$3.50	$3.00	$2.25	$2.25
February	3.00	3.00	2.25	2.25
March	3.00	3.00	2.25	2.25
April	3.00	3.00	2.25	2.25
May	3.00	3.00	2.25	2.25
June	3.00	3.00	2.25	2.25
July	3.00	3.00	2.25	2.25
August	3.00	2.90	2.25	2.10
September	2.90	2.90	2.25	2.25
October	2.90	2.60	2.25	2.25
November	2.60	2.50	2.25	2.25
December	2.50	2.50	2.25	2.25
Year	3.50	2.50	2.25	2.10

Metaphenylenediamine

In June, 1917, the price was $2.05 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.25	$1.25	$1.05	$1.05
February	1.25	1.25	1.00	.85
March	1.25	1.25	.90	.85
April	1.20	1.15	.90	.90
May	1.15	1.15	.90	.90
June	1.15	1.15	.90	.90
July	1.15	1.15	.90	.85
August	1.15	1.15	.85	.85
September	1.10	1.10	.85	.85
October	1.10	1.10	.90	.85
November	1.10	1.05	.90	.90
December	1.05	1.05	.90	.90
Year	1.25	1.05	1.05	.85

Monoethylaniline

In September, 1918, the price was $1.85 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.25	$1.25	$1.10	$1.10
February	1.75	1.75	1.10	1.00
March	1.75	1.75	1.00	1.00
April	1.75	1.75	1.00	1.00
May	1.75	1.75	1.00	.90
June	1.75	1.75	.90	.90
July	1.75	1.75	.90	.90
August	1.75	1.10	.90	.90
September	1.10	1.10	.90	.90
October	1.10	1.10	.90	.90
November	1.10	1.10	.90	.90
December	1.10	1.10	.90	.90
Year	1.75	1.10	1.10	.90

Naphtha, Solvent

In January, 1917, the price was 30c. per gallon.

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.28	$0.28	$0.25	$0.25
February	.28	.28	.25	.25
March	.28	.28	.25	.25
April	.25	.25	.25	.25
May	.25	.25	.25	.25
June	.25	.25	.27	.27
July	.25	.25	.27	.27
August	.25	.25	.27	.27
September	.25	.25	.27	.27
October	.25	.25	.27	.27
November	.25	.25	.27	.27
December	.25	.25	.27	.27
Year	.28	.25	.27	.25

Naphthalene, Flake

In 1901 the price was 2¾c. per pound; October 18, 1911, 2½c.; 1913, 2¼c.; 1916, March, 16c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.08	$0.07¾	$0.06½	$0.06½
February	.08	.08	.06½	.06½
March	.08	.07½	.06½	.06
April	.08	.07½	.06½	.06
May	.07½	.07	.06¼	.06
June	.08	.07	.06¼	.06¼
July	.07¼	.07	.06¼	.06
August	.07	.06¾	.06	.06
September	.06¾	.06½	.06	.06
October	.06½	.06½	.06	.06
November	.07	.06½	.06	.05¾
December	.07	.06½	.05¾	.05¾
Year	.08	.06½	.06½	.05¾

Nitronaphthalene

In May, 1918, the price was 55c. per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.40	$0.40	$0.30	$0.30
February	.40	.40	.30	.30
March	.40	.40	.30	.30
April	.40	.40	.30	.30
May	.40	.40	.30	.30
June	.40	.40	.30	.30
July	.30	.30	.30	.30
August	.30	.30	.30	.30
September	.30	.30	.30	.30
October	.30	.30	.30	.30
November	.30	.30	.30	.30
December	.30	.30	.30	.30
Year	.40	.30	.30	.30

Orthonitrophenol

In October, 1918, the price was $1.70 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.75	$0.75	$0.65	$0.60
February	.75	.75	.65	.65
March	.75	.70	.70	.65
April	.75	.75	.70	.70
May	.75	.75	.70	.70
June	.85	.75	.70	.70
July	.85	.75	.70	.70
August	.75	.75	.70	.70
September	.75	.75	.70	.70
October	.75	.70	.80	.80
November	.70	.68	.85	.80
December	.68	.65	.85	.85
Year	.85	.65	.85	.60

Orthonitrotoluene

In January, 1917, the price was 65c. per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.23	$0.18	$0.15	$0.15
February	.18	.18	.15	.15
March	.18	.18	.15	.12
April	.12	.12	.12	.10
May	.12	.12	.10	.10
June	.12	.12	.10	.10
July	.23	.15	.10	.10
August	.23	.15	.10	.10
September	.15	.15	.10	.10
October	.15	.15	.10	.10
November	.15	.15	.10	.10
December	.15	.15	.10	.10
Year	.23	.12	.15	.10

Orthotoluidine

In March, 1918, the price was $1.25 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.30	$0.20	$0.20	$0.15
February	.20	.20	.15	.15
March	.20	.20	.15	.15
April	.20	.20	.15	.15
May	.20	.20	.15	.15
June	.20	.20	.15	.15
July	.20	.20	.15	.15
August	.20	.20	.15	.15
September	.20	.20	.15	.15
October	.20	.20	.15	.13
November	.20	.20	.13	.13
December	.20	.20	.14	.14
Year	.30	.20	.20	.13

Paramidophenol, Base

In March, 1918, the price was $5.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.90	$1.90	$1.25	$1.25
February	1.90	1.90	1.25	1.25
March	1.90	1.85	1.25	1.25
April	1.75	1.60	1.25	1.20
May	1.60	1.60	1.20	1.20
June	1.60	1.50	1.20	1.20
July	1.50	1.50	1.20	1.20
August	1.40	1.40	1.20	1.20
September	1.40	1.40	1.20	1.20
October	1.40	1.40	1.20	1.20
November	1.30	1.30	1.20	1.20
December	1.30	1.25	1.20	1.20
Year	1.90	1.25	1.25	1.20

Paranitraniline

In October, 1918, the price was $1.90 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.90	$0.85	$0.77	$0.77
February	.95	.75	.77	.77
March	.85	.75	.77	.75
April	.85	.85	.75	.75
May	.85	.85	.74	.74
June	.85	.80	.74	.74
July	.80	.75	.74	.74
August	.80	.75	.74	.74
September	.80	.78	.74	.73
October	.78	.77	.73	.73
November	.75	.75	.73	.73
December	.77	.75	.73	.73
Year	.95	.75	.77	.73

Paranitroacetanilide

In July, 1918, the price was $1.80 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.70	$0.60	$0.60	$0.55
February	.60	.60	.60	.60
March	.60	.60	.60	.60
April	.60	.60	.60	.60
May	.60	.60	.60	.60
June	.60	.60	.60	.60
July	.65	.65	.60	.60
August	.60	.60	.60	.60
September	.60	.60	.60	.60
October	.60	.55	.60	.60
November	.60	.60	.60	.60
December	.65	.60	.60	.60
Year	.70	.55	.60	.55

Paranitrophenol

In June, 1918, the price was $1.40 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.75	$0.70	$0.70	$0.70
February	.70	.70	.70	.65
March	.70	.70	.65	.60
April	.70	.70	.60	.60
May	.70	.70	.70	.65
June	.75	.70	.70	.70
July	.75	.75	.70	.70
August	.75	.75	.75	.75
September	.75	.75	.75	.75
October	.65	.57	.75	.75
November	.70	.57	.75	.75
December	.70	.70	.75	.75
Year	.75	.57	.75	.60

Paranitrotoluene

In January, 1918, the price was $1.60 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.90	$0.90	$0.80	$0.75
February	.90	.90	.75	.75
March	.90	.85	.75	.65
April	.90	.90	.65	.65
May	.90	.90	.60	.55
June	.90	.90	.55	.55
July	.90	.90	.55	.55
August	.90	.90	.55	.55
September	.90	.90	.55	.55
October	.90	.90	.55	.52
November	.90	.80	.52	.46
December	.80	.80	.46	.46
Year	.90	.80	.80	.46

Paratoluidine

In January, 1918, the price was $2.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.75	$1.50	$1.10	$1.10
February	1.50	1.50	1.00	1.00
March	1.50	1.45	1.00	.90
April	1.25	1.25	.90	.90
May	1.25	1.25	1.00	.90
June	1.25	1.25	1.00	1.00
July	1.25	1.25	.90	.90
August	1.25	1.25	.90	.90
September	1.25	1.25	.90	.90
October	1.25	1.25	.90	.90
November	1.25	1.25	.95	.85
December	1.25	1.10	.85	.78
Year	1.75	1.10	1.10	.78

Phenol, U. S. P.

On July 10, 1875, the price was 55c. per pound; October 18, 1881, 40c.; 1891, 12c.; 1901, 23c.; 1911, 15c.; 1913, 8½c.; 1918, February, 18c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.09½	$0.09	$0.11½	$0.11
February	.11	.10	.12	.11½
March	.10	.10	.12	.12
April	.10½	.10½	.13	.12
May	.10½	.10	.12	.12
June	.10	.09½	.14	.12½
July	.09½	.09	.12	.12
August	.09½	.09½	.18	.16
September	.09½	.09	.20	.18
October	.09	.09	.28	.21
November	.10¼	.10	.35	.30
December	.11	.10½	.35	.35
Year	.11	.09	.35	.11

Phosgene

In September, 1918, the price was $1.75 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.45	$0.45	$0.75	$0.75
February	.50	.50	.75	.75
March	.75	.50	.75	.75
April	.50	.50	.75	.75
May	.50	.50	.75	.75
June	.75	.50	.75	.75
July	.75	.75	.75	.75
August	.75	.75	.75	.75
September	.75	.75	.75	.75
October	.75	.75	.75	.75
November	.75	.75	.75	.75
December	.75	.75	.75	.75
Year	.75	.45	.75	.75

Resorcinol, Technical

In December, 1911, the price was 80c. per pound; 1917, December, $9.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$2.50	$1.95	$1.40	$1.40
February	1.95	1.95	1.40	1.25
March	1.95	1.90	1.35	1.25
April	1.75	1.70	1.35	1.35
May	1.70	1.65	1.35	1.35
June	1.65	1.60	1.35	1.35
July	1.60	1.60	1.35	1.35
August	1.60	1.50	1.50	1.35
September	1.50	1.50	1.50	1.50
October	1.60	1.60	1.50	1.50
November	1.40	1.40	1.50	1.50
December	1.40	1.40	1.50	1.50
Year	2.50	1.40	1.50	1.25

Tolidin, Base

In June, 1918, the price was $3 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.30	$1.30	$1.20	$1.20
February	1.30	1.25	1.20	1.20
March	1.25	1.25	1.20	1.20
April	1.25	1.25	1.20	1.15
May	1.25	1.25	1.15	1.15
June	1.25	1.25	1.15	1.15
July	1.25	1.25	1.15	1.15
August	1.20	1.20	1.15	1.15
September	1.20	1.20	1.15	1.15
October	1.20	1.20	1.15	1.15
November	1.20	1.20	1.15	1.15
December	1.20	1.20	1.15	1.15
Year	1.30	1.20	1.20	1.15

Toluene

In February, 1918, the price was $6 per gallon.

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.30	$0.30	$0.30	$0.30
February	.30	.30	.30	.30
March	.30	.30	.30	.30
April	.30	.30	.30	.30
May	.30	.30	.30	.30
June	.30	.30	.30	.30
July	.30	.30	.30	.30
August	.27	.27	.30	.30
September	.27	.27	.30	.30
October	.27	.27	.30	.30
November	.27	.27	.30	.30
December	.27	.27	.30	.30
Year	.30	.27	.30	.30

Xylene, Pure

In February, 1917, the price was $1.20 per gallon.

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.42	$0.42	$0.45	$0.43
February	.42	.42	.45	.45
March	.42	.40	.45	.45
April	.40	.40	.45	.45
May	.40	.40	.45	.45
June	.40	.40	.45	.45
July	.40	.40	.45	.45
August	.40	.40	.45	.45
September	.40	.40	.45	.45
October	.40	.40	.45	.45
November	.40	.40	.45	.45
December	.40	.40	.45	.45
Year	.42	.40	.45	.43

Xylidine

In January, 1918, the price was 90c. per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.40	$0.40	$0.40	$0.40
February	.40	.40	.40	.40
March	.40	.40	.40	.40
April	.40	.40	.40	.40
May	.40	.40	.42	.40
June	.40	.40	.42	.42
July	.40	.40	.42	.42
August	.40	.40	.42	.42
September	.40	.40	.42	.42
October	.40	.40	.42	.42
November	.40	.40	.42	.42
December	.40	.40	.42	.42
Year	.40	.40	.42	.40

Coal Tar Colors

Acid Alkali Blue

In March, 1917, the price was $14 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$6.00	$6.00	$4.50	$4.50
February	6.00	6.00	4.50	4.50
March	6.00	6.00	4.50	4.50
April	6.00	6.00	4.50	4.50
May	6.00	6.00	4.50	4.50
June	6.00	6.00	4.50	4.50
July	6.00	6.00	4.50	4.50
August	6.00	6.00	4.50	4.50
September	5.00	5.00	4.50	4.50
October	5.00	4.50	4.50	4.50
November	4.50	4.50	4.50	4.00
December	4.50	4.50	4.00	3.50
Year	6.00	4.50	4.50	3.50

Acid Black, 10 B

In December, 1918, the price was $2 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.10	$1.10	$1.25	$1.00
February	1.10	1.05	1.00	1.00
March	1.05	1.00	1.00	1.00
April	1.00	1.00	1.00	1.00
May	1.00	1.00	.85	.85
June	1.00	1.00	.85	.85
July	1.00	1.00	.85	.85
August	1.00	1.00	.85	.85
September	1.00	1.00	.85	.85
October	1.00	1.00	.60	.60
November	1.00	1.00	.55	.55
December	1.00	1.00	.60	.55
Year	1.10	1.00	1.25	.55

Acid Blue G

In January, 1918, the price was $12 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$3.60	$3.60	$2.50	$2.50
February	2.50	2.50	2.50	2.50
March	2.50	2.50	2.50	2.50
April	2.50	2.50	2.50	2.50
May	2.50	2.50	2.50	2.50
June	2.50	2.50	2.50	2.50
July	2.50	2.50	2.50	2.50
August	2.50	2.50	2.50	2.50
September	2.50	2.50	2.50	2.50
October	2.50	2.50	2.50	2.50
November	2.50	2.50	2.50	2.50
December	2.50	2.50	2.50	2.50
Year	3.60	2.50	2.50	2.50

Acid Cyanine B

In November, 1918, the price was $4.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$3.25	$3.25	$3.25	$3.25
February	3.25	3.25	3.25	3.25
March	3.25	3.10	3.25	3.25
April	3.25	3.25	3.25	3.25
May	3.25	3.25	3.25	3.25
June	3.25	3.25	3.00	3.00
July	3.25	3.25	2.10	2.00
August	3.25	3.25	1.50	1.00
September	3.25	3.25	.70	.70
October	3.25	3.25	.70	.70
November	3.25	3.25	.70	.70
December	3.25	3.25	.70	.70
Year	3.25	3.10	3.25	.70

Acid Eosine B

In January, 1891, the price was 80c. per pound; October 18, 1901, 95c.; 1911, 85c.; 1918, January, $10.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$4.50	$4.50	$3.75	$3.75
February	3.90	3.90	3.75	3.75
March	3.90	3.85	3.75	3.75
April	3.90	3.90	3.75	3.75
May	3.90	3.75	3.75	3.75
June	3.75	3.75	3.75	3.75
July	3.90	3.90	3.75	3.75
August	3.75	3.75	3.75	3.75
September	3.75	3.75	3.75	3.75
October	3.75	3.75	3.75	3.75
November	3.75	3.75	3.75	3.75
December	3.75	3.75	3.75	3.75
Year	4.50	3.75	3.75	3.75

Acid Green G

In December, 1918, the price was $6.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$4.00	$4.00	$3.00	$3.00
February	4.00	4.00	3.00	3.00
March	4.00	3.25	3.00	3.00
April	4.00	4.00	3.00	3.00
May	4.00	4.00	3.00	3.00
June	4.00	4.00	3.00	3.00
July	4.00	4.00	3.00	3.00
August	4.00	4.00	3.00	3.00
September	3.00	3.00	3.00	3.00
October	3.00	3.00	3.00	3.00
November	3.00	3.00	3.00	3.00
December	3.00	3.00	3.00	3.00
Year	4.00	3.00	3.00	3.00

Acid Metanil Yellow

In August, 1918, the price was $2.40 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.25	$1.25	$1.10	$1.10
February	1.25	1.25	1.10	1.10
March	1.25	1.25	1.10	1.10
April	1.25	1.25	1.10	1.10
May	1.25	1.25	1.10	1.10
June	1.25	1.25	.80	.80
July	1.25	1.25	.80	.80
August	1.25	1.25	.80	.80
September	1.25	1.25	.80	.80
October	1.25	1.10	.80	.80
November	1.10	1.10	.80	.80
December	1.10	1.10	.80	.80
Year	1.25	1.10	1.10	.80

Acid Orange A

In January, 1891, the price was $1.10 per pound; October 18, 1901, 85c.; 1911, 90c.; 1913, $1.20; 1917, August, $1.60.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.55	$0.55	$0.55	$0.55
February	.55	.55	.55	.55
March	.55	.55	.55	.55
April	.55	.55	.55	.55
May	.55	.55	.55	.55
June	.55	.55	.55	.55
July	.55	.55	.35	.35
August	.55	.55	.35	.35
September	.55	.55	.35	.35
October	.55	.55	.35	.35
November	.55	.55	.35	.35
December	.55	.55	.35	.30
Year	.55	.55	.55	.30

Acid Patent Blue

In November, 1917, the price was $22 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$7.00	$7.00	$6.50	$6.50
February	6.50	6.50	6.50	6.50
March	6.50	6.25	6.50	6.50
April	6.50	6.50	6.50	6.50
May	6.50	6.50	6.50	6.50
June	6.50	6.50	3.50	3.50
July	6.50	6.50	3.50	3.50
August	6.50	6.50	3.50	3.50
September	6.50	6.50	3.50	3.50
October	6.50	6.50	3.50	3.50
November	6.50	6.50	3.50	3.50
December	6.50	6.50	3.50	3.50
Year	7.00	6.25	6.50	3.50

Acid Wool Green S

In December, 1917, the price was $8.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$5.00	$5.00	$1.60	$1.60
February	3.75	3.75	1.60	1.60
March	3.75	3.50	1.25	1.25
April	3.75	3.75	1.25	1.25
May	3.75	3.75	1.25	1.25
June	3.75	3.75	1.25	1.25
July	2.50	2.50	1.05	1.05
August	2.50	2.00	1.05	1.05
September	2.00	2.00	1.05	1.05
October	2.00	2.00	1.05	1.05
November	2.00	2.00	1.05	1.05
December	1.60	1.60	1.05	1.05
Year	5.00	1.60	1.60	1.05

Auramine O, Basic

In December, 1918, the price was $5 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$4.00	$4.00	$2.00	$2.00
February	3.00	3.00	2.00	2.00
March	3.00	3.00	1.25	1.25
April	2.00	2.00	1.25	1.25
May	2.00	2.00	1.25	1.25
June	2.00	2.00	1.25	1.25
July	2.00	2.00	1.25	1.25
August	2.00	2.00	1.25	1.25
September	2.00	2.00	1.25	1.25
October	2.00	2.00	1.25	1.25
November	2.00	2.00	1.25	1.25
December	2.00	2.00	1.25	1.25
Year	4.00	2.00	2.00	1.25

Basic Bismarck Brown R

In January, 1891, the price was 55c. per pound; October 18, 1901, 60c.; 1911, 50c.; 1913, 45c.; 1918, February, $1.25.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.00	$1.00	$0.70	$0.70
February	.75	.75	.70	.70
March	.75	.75	.70	.70
April	.75	.75	.70	.70
May	.75	.75	.70	.70
June	.75	.75	.60	.60
July	.75	.75	.60	.60
August	.75	.70	.60	.60
September	.70	.70	.60	.60
October	.70	.70	.60	.60
November	.70	.70	.60	.60
December	.70	.70	.60	.60
Year	1.00	.70	.70	.60

Basic Fuchsine Crystals

In January, 1891, the price was $1 per pound; October 18, 1901, $1.85; 1911, $2.40; 1913, $3; 1918, March, $11.25.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$5.00	$5.00	$3.50	$3.50
February	5.00	4.25	3.50	3.50
March	4.25	4.25	3.50	3.50
April	3.60	3.60	3.00	3.00
May	3.60	3.60	3.00	3.00
June	3.60	3.60	3.00	3.00
July	3.50	3.50	3.00	3.00
August	3.50	3.50	3.00	3.00
September	3.50	3.50	3.00	3.00
October	3.50	3.50	3.00	3.00
November	3.50	3.50	3.00	3.00
December	3.50	3.50	3.00	3.00
Year	5.00	3.50	3.50	3.00

Basic Malachite Crystals

In January, 1918, the price was $11.75 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$3.25	$3.25	$2.10	$2.10
February	2.90	2.80	2.10	2.10
March	2.80	2.50	2.10	2.10
April	2.75	2.75	1.60	1.60
May	2.75	2.75	1.60	1.60
June	2.75	2.75	1.60	1.60
July	2.75	2.75	1.60	1.60
August	2.75	2.75	1.60	1.60
September	2.75	2.75	1.60	1.60
October	2.25	2.25	1.60	1.60
November	2.25	2.25	1.60	1.60
December	2.10	2.10	1.60	1.60
Year	3.25	2.10	2.10	1.60

Basic Methyl Violet Base, Conc.

In December, 1917, the price was $8.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$3.75	$3.50	$2.25	$2.25
February	3.75	2.75	2.25	2.25
March	2.75	2.75	2.25	2.25
April	2.50	2.50	2.25	2.25
May	2.50	2.50	2.25	2.25
June	2.50	2.50	2.25	2.25
July	2.50	2.25	2.00	2.00
August	2.25	2.25	2.00	2.00
September	2.25	2.25	2.00	2.00
October	2.25	2.25	2.00	2.00
November	2.25	2.25	2.25	2.25
December	2.25	2.25	2.25	2.25
Year	3.75	2.25	2.25	2.00

Basic Methylene Blue (ex-Conc.)

In January, 1891, the price was $2.50 per pound; 1918, January, $4.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$2.75	$2.75	$2.00	$2.00
February	2.75	2.75	2.00	2.00
March	2.75	2.75	2.00	2.00
April	2.50	2.50	2.00	2.00
May	2.50	2.50	2.00	2.00
June	2.50	2.50	2.00	2.00
July	2.50	2.50	2.00	2.00
August	2.50	2.50	1.85	1.85
September	2.50	2.50	1.85	1.85
October	2.50	2.50	1.85	1.85
November	2.50	2.50	1.85	1.85
December	2.00	2.00	1.85	1.85
Year	2.75	2.00	2.00	1.85

Basic Rhodamine B

In December, 1918, the price was $14 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$3.50	$3.50	$2.00	$2.00
February	3.50	3.50	2.00	2.00
March	3.50	3.50	2.00	2.00
April	2.50	2.50	2.00	2.00
May	2.50	2.50	2.00	2.00
June	2.50	2.50	2.00	2.00
July	2.50	2.50	2.00	2.00
August	2.50	2.50	2.00	2.00
September	2.50	2.50	2.00	2.00
October	2.50	2.50	2.00	2.00
November	2.50	2.50	2.00	2.00
December	2.00	2.00	2.00	2.00
Year	3.50	2.00	2.00	2.00

Basic Safranine B

In January, 1918, the price was $7.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$4.00	$4.00	$2.50	$2.50
February	4.00	4.00	2.50	2.50
March	4.00	4.00	2.50	2.50
April	3.25	3.25	2.50	2.50
May	3.25	3.25	2.50	2.50
June	3.25	3.25	2.50	2.50
July	3.25	3.25	2.50	2.50
August	3.25	3.25	2.50	2.50
September	3.25	3.25	2.50	2.50
October	3.25	3.25	2.50	2.50
November	3.25	3.25	2.50	2.50
December	2.50	2.50	2.50	2.50
Year	4.00	2.50	2 50	2.50

Basic Victoria Blue Base

In January, 1918, the price was $15 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$5.75	$5.75	$5.50	$5.50
February	5.00	5.00	5.50	5.50
March	5.00	5.00	5.50	5.50
April	5.50	5.50	5.50	5.50
May	5.50	5.50	5.50	5.50
June	5.50	5.50	5.00	5.00
July	5.50	5.50	4.75	4.50
August	5.50	5.50	4.50	4.50
September	5.50	5.50	4.00	4.00
October	5.50	5.50	4.00	4.00
November	5.50	5.50	4.00	4.00
December	5.50	5.50	4.00	4.00
Year	5.75	5.00	5.50	4.00

Chrome Green

In January, 1918, the price was $3.75 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$3.50	$3.50	$1.50	$1.50
February	3.50	3.50	1.50	1.50
March	3.50	3.50	1.50	1.50
April	3.50	3.50	1.50	1.50
May	3.50	3.50	1.50	1.50
June	1.50	1.50	1.50	1.50
July	1.50	1.50	1.50	1.50
August	1.50	1.50	1.50	1.50
September	1.50	1.50	1.50	1.50
October	1.50	1.50	1.50	1.50
November	1.50	1.50	1.50	1.50
December	1.50	1.50	1.50	1.50
Year	3.50	1.50	1.50	1.50

Chrome Yellow G

In January, 1918, the price was $2 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.65	$0.60	$0.65	$0.65
February	.60	.60	.65	.65
March	.60	.60	.65	.65
April	.65	.65	.65	.65
May	.65	.65	.65	.65
June	.65	.65	.65	.65
July	.65	.65	.65	.65
August	.65	.65	.65	.65
September	.65	.65	.65	.65
October	.65	.65	.60	.60
November	.65	.65	.60	.60
December	.65	.65	.65	.65
Year	.65	.60	.65	.60

Direct Black

In November, 1917, the price was $3.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.95	$0.85	$0.75	$0.75
February	.85	.80	.75	.75
March	.80	.80	.75	.75
April	.80	.80	.55	.55
May	.80	.80	.40	.40
June	.80	.80	.40	.40
July	.80	.75	.40	.40
August	.75	.75	.40	.40
September	.75	.75	.40	.40
October	.75	.75	.40	.40
November	.75	.75	.40	.40
December	.75	.75	.40	.40
Year	.95	.75	.75	.40

Direct Bordeaux

In January, 1918, the price was $2 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.90	$1.90	$1.75	$1.75
February	1.90	1.90	1.75	1.75
March	1.90	1.90	1.60	1.60
April	1.90	1.90	1.75	1.75
May	1.90	1.90	1.75	1.75
June	1.90	1.90	1.75	1.75
July	1.90	1.90	1.50	1.50
August	1.90	1.90	1.50	1.30
September	1.90	1.90	1.60	1.60
October	1.90	1.90	1.75	1.75
November	1.75	1.75	1.75	1.75
December	1.75	1.75	1.75	1.75
Year	1.90	1.75	1.75	1.30

Direct Congo Red 4-B (Conc.)

In January, 1918, the price was $2.25 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.00	$1.00	$0.90	$0.90
February	1.00	1.00	.90	.90
March	1.00	1.00	.90	.90
April	.90	.90	.90	.90
May	.90	.90	.95	.95
June	.90	.90	.95	.95
July	.90	.90	.60	.60
August	.90	.90	.60	.50
September	.90	.90	.50	.45
October	.90	.90	.45	.45
November	.90	.90	.40	.40
December	.90	.90	.50	.45
Year	1.00	.90	.95	.40

Direct Green B

In January, 1918, the price was $2.50.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.50	$1.50	$1.25	$1.25
February	1.50	1.50	1.25	1.25
March	1.50	1.50	1.15	1.15
April	1.50	1.45	1.15	1.15
May	1.45	1.45	1.15	1.15
June	1.25	1.25	.85	.85
July	1.25	1.25	.85	.80
August	1.25	1.25	.80	.80
September	1.25	1.25	.75	.75
October	1.25	1.25	.75	.75
November	1.25	1.25	.75	.75
December	1.25	1.25	.75	.75
Year	1.50	1.25	1.25	.75

Direct Orange

In January, 1918, the price was $2.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.50	$1.50	$0.90	$0.90
February	1.50	1.50	.90	.90
March	1.50	1.50	.90	.90
April	1.35	1.25	.90	.90
May	1.25	1.25	.90	.90
June	1.00	1.00	.90	.90
July	1.00	.90	.90	.90
August	.90	.90	.90	.90
September	.90	.90	.90	.90
October	.90	.90	.90	.90
November	.90	.90	.90	.90
December	.90	.90	.90	.90
Year	1.50	.90	.90	.90

Sulphur Green

In January, 1918, the price was $1.50 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.00	$1.00	$1.00	$1.00
February	1.00	1.00	1.00	1.00
March	1.00	1.00	1.00	1.00
April	1.00	1.00	1.00	1.00
May	1.00	1.00	1.00	1.00
June	1.00	1.00	1.00	1.00
July	1.00	1.00	1.00	1.00
August	1.00	1.00	.95	.95
September	1.00	1.00	.95	.95
October	1.00	1.00	.95	.95
November	1.00	1.00	.95	.95
December	1.00	1.00	.95	.95
Year	1.00	1.00	1.00	.95

Sulphur Yellow

In January, 1918, the price was 90c. per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.00	$1.00	$0.85	$0.85
February	1.00	1.00	.85	.85
March	1.00	1.00	.85	.85
April	1.00	.90	.75	.75
May	.90	.90	.75	.75
June	.85	.85	.75	.75
July	.85	.85	.75	.75
August	.85	.85	.75	.75
September	.85	.85	.75	.75
October	.85	.85	.75	.75
November	.85	.85	.65	.65
December	.85	.85	.65	.65
Year	1.00	.85	.85	.65

Union Navy Blue

In January, 1918, the price was $3.75 per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$2.25	$2.25	$2.25	$2.25
February	2.25	2.25	2.25	2.25
March	2.25	2.25	2.25	2.25
April	2.25	2.00	2.25	2.25
May	2.00	2.00	2.25	2.25
June	2.25	2.25	2.25	2.25
July	2.25	2.25	2.25	2.25
August	2.25	2.25	2.25	2.25
September	2.25	2.25	2.25	2.25
October	2.25	2.25	2.25	2.25
November	2.25	2.25	2.25	2.25
December	2.25	2.25	2.25	2.25
Year	2.25	2 00	2.25	2.25

British Dye Users and the Dyestuffs Act

A referendum taken by the Manchester Chamber of Commerce showed that even a greater majority of its members were opposed to the dyestuffs act than to the safeguarding of industries act. This was at the time a surprising result, and it suggested that the textile trade of Lancashire was severely affected by the present methods of applying protection to the British dyemaking industry. With a view of ascertaining rather more closely the trend of opinion among the people most directly concerned, the Manchester Guardian Commercial invited some 1,150 firms in the textile, paint, and paper making trades to reply to the following two questions:—

Do you favor the repeal of the Dyestuffs (Import Regulation) Act?

If so, are you in favor of a subsidy or other assistance being given to the British dye industry?

The list of addresses was compiled with care, in order to make it as exhaustive as possible. It included every color-user of importance in the three industries which themselves consume the bulk of the dyes produced in or imported into the United Kingdom, excluding, of course, the Irish Free State, which is developing an independent fiscal policy. Textile users naturally predominated in the list, to a degree, in fact, of over three to one, and measures were taken to distinguish between the replies received from textile and non-textile users. The bulk of the paint-makers comprised those firms which are technically known in that industry as "lake-makers" or "color-makers."

Definite replies were received from 664 firms. Inconclusive replies or long letters of explanation were sent by several other firms, but these have been excluded from the following analysis of the result:—

	Textile.	Non-textile.	Total.
A. Votes in favor of the repeal of the act...	479	48	527
B. Votes against all protection of the British dye industry....	168	27	195
C. Votes in favor of a subsidy or some other assistance being granted as an alternative to the act	307	22	329
D. Votes against repeal.	102	28	130
E. Majority in favor of repeal	377	20	397

It will be seen that of those who condemn the act a majority of 134 favor the continuance of protection in some other form, many of them declaring their preference for a subsidy. All voters did not answer both questions. They were also not asked to sign their replies. However, a large proportion of them did so, and consequently it is possible to state that the above analysis represents the opinion of the more important color-users.

The questions were framed so as to invite a direct monosyllabic answer, but this subject of protection for the dye industry has evidently been pondered very deeply, for many votes were accompanied by the private opinions of the voter. For instance, in the case of one large combine which received a vote for each of its branches, the answer to the first question was "Yes, provided other measures are taken to safeguard the dye-making industry on a scale adequate for national security." This qualification was taken to be implied by an affirmative answer to the second question, and all such replies have been counted in the above analysis. The only vote which could not be reconciled into any of the four categories was that of a firm which replied to the first question: "Yes, if the safeguarding of industries act is abolished at the same time—not otherwise."

Many of the minority who voted against the repeal of the act emphasized their objection to a free trade policy in various ways, and their still more diverse replies to the second question have not been counted, for it was assumed that, if they were satisfied with the working of the act, no lighter measure of protection would appeal to them.

Taken as a whole, the result betokens a singular condemnation of the act by those who have first-hand experience of its shortcomings. It is condemned, moreover, by a majority which is largely in favor of some temporary measure of protection. We use the word "temporary" owing to the frequency with which it was inserted on the voting papers. The peculiar machinery by which dye-making is now protected in this country imposes a quite unnecessary handicap on trades which are much more important to the welfare of the nation. Parliament, which is due to meet shortly, should not fail to demand the immediate consideration of alternative methods of protection.

Dye Developments Studied

Investigations to aid in the development of the dye industry in this country were continued by the Bureau of Chemistry during the past fiscal year, according to its report for 1922. Some of the work of the bureau along the line of color investigations is detailed in the report, as follows:—

Indigo

Indigo is one of the most important dyes manufactured in the United States. The process at present in use in this country has been not altogether satisfactory, and an investigation was undertaken with a view of substituting an alternative method for the preparation of this dye. A survey was made of the entire process and the results obtained indicate that indigo of good quality can be obtained at a somewhat lower price than is possible by the method now in vogue. Two papers on this work were published.

Indigo Derivative from Cymene

A new dye similar in dyeing properties to indigo has been made from cymene—a waste product obtained in the preparation of paper pulp from certain resinous wood. A paper giving a detailed description for making this dye was published.

Anthraquinone from Anthracene

Anthraquinone is an intermediate used in the preparation of the valuable dye "alizarin." A relatively simple method was worked out for the making of anthraquinone from anthracene, one of the "crudes" obtained from coal-tar, using the oxygen of the air instead of the rather expensive chemicals heretofore used. A public service patent was granted on this process.

Vital Red

Although this dye is used in only small amounts, it is nevertheless of tremendous importance both in time of peace and in war. It is used by physicians in testing blood volume. The medical men have been unable to secure the dye in this country in satisfactory quality and accordingly a complete study of the method of preparation was undertaken. Several batches have already been prepared and submitted to expert medical investigators for examination. Work on this dye is being continued.

Synthetic Thymol

The report says that synthetic thymol identical with the natural product can be obtained from cymene, a waste product of the paper industry, of which 2,000,000 gallons are estimated to be wasted annually in this country and Canada. It is stated that thymol is now sold for $4.50 a pound, whereas the synthetic product can be made for $2.50 a pound. The report says that a patent on the process has been applied for and that several chemical manufacturers have become interested in it and it is likely that this country will soon be able to produce all the thymol used here.

In the certification of dyes to be used for coloring food products from 8,000 to 9,000 pounds of dyes are certified every month.

Continuing, the report tells of dye investigations in part as follows:—

Photosensitizing Dyes

These dyes are used in photographic work, especially in aerial and astronomical photography. Improvements have been made in the preparation of a number of these dyes. A new method for making the dye known as "dicyanine" was discovered and a public service patent applied for.

New Analytical Method

The greatest need of the dye industry at the present time is for better methods of analyzing dyes and intermediates used in preparing them in order to produce dyes that will give uniform results. Work along this line was undertaken and a new method devised for the detection of "H" acid, a substance used very extensively in the dye industry. A full description of the method was published in one of the technical journals.

Physical Chemical Measurements

Inasmuch as no reliable data were available on certain physical constants of the more important intermediates, work was undertaken for their determination. Vapor pressure measurements were made on naphthalene, anthracene, phenanthrene, and anthraquinone. The solubility of certain naphthalene sulphonic acids which are used in the dye industry was determined.

Vat Indigo 20% Paste

In October, 1901, the price was 38c. per pound; October 18, 1911, 35c.; 1913, 42c.; 1917, $1.50

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.95	$0.95	$0.60	$0.60
February	.75	.65	.60	.60
March	.65	.65	.60	.60
April	.85	.65	.60	.60
May	.65	.65	.55	.55
June	.85	.85	.50	.50
July	.85	.85	.50	.50
August	.85	.60	.45	.45
September	.60	.60	.45	.45
October	.60	.60	.45	.40
November	.60	.60	.40	.40
December	.60	.60	.35	.25
Year	.95	.60	.60	.25

Tariff Competitivity of Dyes

The rules of the Treasury Department for determining competitivity or non-competitivity of dyes offered for import are:—

Determination of Competitive Articles

(a) A domestic article shall be considered a similar competitive article if in the use or uses which require a major portion of the total consumption in the United States of the imported and the domestic article, the imported article accomplishes results substantially equal to those accomplished by the domestic article when used in substantially the same manner.

(b) An imported article which is or may be used for the same purpose as a domestic article not freely offered for sale but used in the manufacture of another domestic article freely offered for sale, shall be considered a similar competitive article.

Lists of Competitive and Non-Competitive Articles

(a) The Appraiser at New York shall issue at once lists of articles which he believes to be competitive and non-competitive, and shall from time to time add articles thereto or remove articles therefrom as investigation shall justify. Such lists shall be advisory only, and at the top of each list shall appear the following statement: "This list is advisory only and in no manner relieves appraising officers from the duty of independent appraisement required by law."

Articles Not Coal-Tar Products

The words "similar competitive articles" in paragraphs 27 and 28 shall not be construed as relating exclusively to coal-tar products. An imported coal-tar product may be compared with a domestic non-coal-tar product, or an imported non-coal-tar product dutiable under paragraph 27 or 28 with a domestic coal-tar product, for the purpose of determining whether they are similar competitive articles. The rule provided in paragraphs 27 and 28 for the determination of similar competitive articles and the regulations herein provided shall be applied in such cases.

Dyestuffs and Tanstuffs: Market Review

The position of the market for natural dyestuffs and tanstuffs at the close of 1922 was much stronger than at the commencement of the year. Prices on practically every item had advanced during the year, some increases as much as 50 per cent. having been registered from January to December. Whether the market was more satisfactory to those either buying or selling at the higher levels than it had been when prices were lower was answered by the vendors, who found in the conditions of the last quarter sufficient recompense for their anxieties during the first three-quarters.

At the beginning of the year there were large spot stocks of gambier, cutch, myrobalans, divi divi, nutgalls, and, to a lesser degree, sumac. With supplies abundant, buyers were reluctant to enter the market, and consequently trading languished. Toward the end of February an excellent inquiry developed, with a good deal of buying in its wake, for valonia, gambier and cutch. This was due chiefly to the increasing activity in the leather industry. Tanneries began to operate on a large scale for the first time in two years. During those idle years, consumers had bought only the minimum quantities needed to carry operations from month to month. Only when there was a large order to be prepared, was there any buying beyond the routine. Then sufficient supplies were taken to last approximately the length of time it would take to prepare the goods in hand. Otherwise, only routine and hand-to-mouth purchases were made.

Thus, the first six or eight months of the year witnessed a market extremely well stocked with supplies of raw material, and only a comparatively short period when it could be said that demand even approached normal. That was during the last part of February, through March and the first part of April. The increase in demand during those weeks encouraged factors enormously; it was felt that the long depression in tanning materials was over. Unfortunately, the recovery was not maintained. The summer and autumn months saw the market languishing; trading was almost at a standstill. Supplies were still in large volume. The reason for this was that there had been heavy importations when it was seen there was a good demand. Importers hoped to dispose of their shipments readily, but by the time many arrived the demand had passed, and the market was stagnant.

Replacement Costs a Support

This long period of depression was characterized by low prices and falling values. The chief peg in the downward descent of the prices of imported materials were the replacement costs. These were sufficiently high in most instances to discount declines below certain levels, although it was no rarity to hear of some holder having wearied of the game and sold out at a ridiculously low figure. The finality with which importations were cut off after the first six or eight weeks of the dullness resulted in the spot market gradually getting clear of supplies.

During the first three months of the year there was a steady advance in the freight rates on Indian charters, and the whole Eastern waters were affected. Whereas the actual buying price of certain materials, myrabolans, divi divi, etc., did not advance much, the big rise in transportation charges made it necessary for consumers here to pay high prices. These were balked at, but importers had no alternative. When consumers did not continue to buy during the summer importers refused to bring in goods on their own, and would wait until orders accumulated to make it worth while. The small lot buying that went on generally depleted spot stocks. After having been dead practically all summer there was a revival of buying in October and November. This led to some interesting developments, and completed the advances of the year. It will be observed in any survey of the comparative prices for the year that nearly all of the Eastern produce showed an advancing tendency from the beginning of the year until the close, the pinnacle more often than not being reached in December.

When buying picked up in October and November, spot stocks were found to be small. In some cases goods were unobtainable. Dealers oversold in the hope of being able to place their hands on goods as soon as wanted. Alas for their plans, it seemed that the position of goods in primary markets had altered greatly during the preceding six months when all was quiet here. Orders poured into exporters' offices, only to be refused or filled at high prices. The little stocks left in the New York market were grabbed up, and prices jumped immediately. For the nonce, gambier became a speculative item, comparable to the madder of old. In one month (December) the price advanced 3c., a gain of 50 per cent.

The price of gambier at the beginning of January, 1922, was 6½c. That price was maintained with considerable precision during the first three months of the year. During the early summer, it declined fractionally, but shortly recovered to the former level. That price was approximately the cost of importing. Demand did not wax strong until well toward the close of the year. During the first half of the year trading was along quiet lines, most of the demand coming from the silk mills and the tanneries being comparatively small takers. During the late spring there was a little buying on the part of tanneries, but it did not last; and consumers most often in evidence thereafter were the silk mills.

Dealers began to sell short in the early fall. After the uneventful summer it was felt that there was no risk in taking this chance. Some large lots were sold, and then, when time for delivery came around, dealers began to look about for supplies to satisfy these contracts. The spot market immediately looked up, and during December the price rose to 9½c. for the common grade. It was discovered that East Indian stocks were small, and were held for high prices. That something in the way of a shortage had been brought about by the natives not gathering as much as usual, and therefore artificially inflating values, was obvious; but consumers here could not alter the situation, and importers and dealers did not, although trying hard enough. The closing weeks of December saw prices at the high, demand heavy, dealers endeavoring to cover on contracts, and goods scarce everywhere.

Cutch Made Late Recovery

Cutch was another item that came in for a good deal of attention during November and December after having been in obscurity for practically the first ten months of the year. Most consumers of this dyestuff contract for shipments over the whole year, and that resulted last year in a more or less steady influx of small quantities from month to month. These shipments moved directly to consumers, and stocks on spot remained small. A better consumptive demand developed at the end of the year than had been anticipated, which resulted in prices for spot goods advancing rapidly. Shipments were unchanged in price throughout the entire year, but there were delays in shipments and other hindrances to the free arrival of supplies which caused a premium to be placed on spot goods. From 3½c. in the early summer, the price gradually advanced to 4½c. in December.

The trade in myrobalans, which formerly was of such great proportions, was far from flourishing last year. Demand from United States was not the only one which showed decrease; the whole European trade was much less, and Indian exporters had a very bad year. The Balkan countries, Lithuania and the Central Provinces, were about the best buyers, as they were of many other tanning materials. Domestic exports of tanning extracts were largely directed to those centers, as a glance at the export figures of United States for the past year will show. Indian dealers practically control the export situation in the East. The collection of the fruit is a considerable minor source of income. Usually the season's crop is sold by tender on the trees, but contracts over a period of years are sometimes made, the buyers undertaking to collect and dry the nuts, which are then sent to the warehouses, where they are sorted and cleaned before being packed for shipments.

There are five varieties of myrobalans recognized in commerce, named according to district of origin: Bimlies, or "B's" from near Madras; Jubbelpores, or "J's" from the Central Provinces; Rajpores, or "R's," from Kholapur State; "Vingorlas, or "V's," from Bombay forests; and Coast Madras. Each variety is separated into two grades. Practically the only grade that comes to America is "J's." Occasionally there have been shipments of "R's," but the only variety steadily obtainable has been "J's." Nearly all myrobalans coming to this country are shipped whole, although some agitation has been afoot to have the nuts shipped crushed. Such shipments as have been received, however, have become sticky and formed in lumps, which prevented easy extraction of the tannin content. Powdered myrobalans have been used to some extent in the dyeing of woolens, but such use has been principally confined to England. In this country

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BLEACHING POWDER

there has been no attempt to utilize myrobalans in the woolen industry.

It does not appear that demand for this valuable tanning extract will be maintained, or rather expand. Sumac is replacing it to a considerable extent, although higher in price. The domestic demand during the year was very light compared with former times. But much of the decrease in buying may be attributed to the high prices that have been asked by importers. These high prices were due to the excessive charges for transportation from the Orient here, and not so much to the prices of goods in primary points. Prospects for a continuation of importation were not good, and factors expressed the opinion that nothing would tempt them to import on their own any more. That attitude was frequently found in the market where Far East produce was traded in, and seemed to be a general attitude at the end of last year. Certainly, the volume of business transacted last year was not great enough to offer any encouragement to the average dealer.

Chinese Wars Affect Albumen

Egg albumen was in light supply all the year. This was due to the civil wars which tore China to pieces during the spring and which prevented proper operation of the egg factories. Only about half the normal production was achieved. Prices ruled very high in the New York market. Efforts to increase spot stocks by purchases in the two other big distributing points, Hamburg and London, failed. Neither of those cities had any supplies beyond what they needed for their own uses. The price in January was 65c., but by September had risen to 80c., where it continued the rest of the year.

Jamaica produces practically all the annatto seed now used in United States. There has not been a heavy consumption in recent years, and aside from the coloring of cheese, practically none is used any more. There has been an attempt made to prevent its use as a food coloring, but it is still consumed in a small way in the cheese industry. The price of the seed has been low for a long time, and at the beginning of the year was not above 4c. This low price offered little inducement to natives in Jamaica, who ordinarily gather the seed from the bushes which grow wild in many parts of the island. Consequently, hardly any was gathered, with result that the small stocks usually held on spot were exhausted. Replacement prices showed a marked increase, and advanced from 4c. to 9¾c. During December the spot market was practically bare.

Tanning extracts were marked by steady advances throughout the year. These advances in chestnut, quebracho, sumac and other extracts chiefly used in tanning were brought about by the steadily mounting cost of production and the very high prices paid for raw materials. None of the woods has come down the least in price and most of them went up. Chestnut wood suitable for making extract was $8 a cord in November. Sumac advanced only slightly, but shipment prices over the first of 1923 were extremely high. This was because of the partial failure of the Sicilian crop. Logwood and fustic wood held unchanged, which resulted in the extracts remaining at steady levels.

Dyestuffs and Tanstuffs: Record of Prices

Albumen, Egg

On October 18, 1871, the price was $1.25 per pound; 1881, 75c.; 1891, 33c.; 1901, 35c.; 1911, 50c.; 1913, 42c.; 1918, July, $2.40.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.50	$0.42	$0.70	$0.65
February	.48	.45	.70	.65
March	.45	.45	.70	.68
April	.45	.45	.72	.68
May	.45	.45	.75	.72
June	.55	.45	.75	.75
July	.60	.55	.75	.75
August	.60	.55	.75	.75
September	.60	.60	.80	.75
October	.70	.60	.80	.80
November	.70	.70	.80	.80
December	.70	.70	.80	.80
Year	.70	.42	.80	.65

Annatto, Seed

On October 18, 1871, the price was 30c. per pound; 1881, 20c.; 1891, 10c.; 1901, 8c.; 1911, 32c.; 1913, 7c.; 1917, January, 17c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.05	$0.04	$0.04	$0.04
February	.04	.04	.04	.04
March	.04	.04	.05	.04
April	.04	.04	.05	.05
May	.04	.04	.06	.05½
June	.40	.40	.06½	.06
July	.04	.04	.06	.05
August	.04	.04	.05½	.05½
September	.04	.04	.06	.06
October	.04	.04	.06¼	.06
November	.04	.04	.09¾	.07½
December	.04	.04	.09¾	.09¾
Year	.05	.04	.09¾	.04

Antimony Salt

On October 18, 1871, the price was 11c. per pound; 1881, 6c.; 1891, 4c.; 1901, 16c.; 1911, 12c.; 1913, 11½c.; 1918, November, 75c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.45	$0.45	$0.30	$0.30
February	.40	.40	.30	.26
March	.40	.40	.26	.26
April	.40	.40	.26	.25
May	.40	.40	.25	.25
June	.40	.38	.25	.25
July	.38	.38	.25	.25
August	.38	.37	.25	.25
September	.36	.36	.26	.25
October	.36	.32	.26	.26
November	.32	.30	.26	.26
December	.30	.30	.26	.26
Year	.45	.30	.30	.25

Cochineal, Rosy Black

On October 18, 1871, the price was 67½c. per pound; 1881, 43c.; 1891, 27c.; 1901, 20c.; 1911, 25½c.; 1913, 45c.; 1918, November, $1.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.55	$0.40	$0.35	$0.35
February	.40	.40	.35	.35
March	.40	.40	.35	.35
April	.40	.40	.35	.35
May	.40	.40	.35	.35
June	.40	.40	.35	.34
July	.40	.40	.34	.34
August	.40	.40	.34	.34
September	.40	.40	.35	.34
October	.35	.35	.35	.35
November	.35	.35	.35	.35
December	.35	.35	.35	.35
Year	.55	.35	.35	.34

Cutch, Borneo

On October 18, 1871, the price was 4½c. per pound; 1881, 5⅝c.; 1891, 7¼c.; 1901, 4¼c.; 1911, 5¾c.; 1913, 6c.; 1918, November, 27c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.10	$0.10	$0.03½	$0.03½
February	.10	.10	.03½	.03½
March	.10	.10	.03½	.03½
April	.09	.09	.03¾	.03½
May	.09	.09	.03¾	.03¾
June	.09	.09	.03¾	.03¾
July	.09	.09	.03¾	.03¾
August	.09	.09	.03¾	.03¾
September	.09	.09	.03¾	.03¾
October	.09	.08½	.04	.03¾
November	.08½	.08½	.04¼	.04
December	.08½	.08½	.04½	.04¼
Year	.10	.08½	.04½	.03½

Dextrine, Corn

On October 18, 1871, the price was $8 per 100 pounds; 1881, $6.40; 1891, $6; 1901, $2.70; 1911, $2.87; 1913, $3.17; 1918, June, $9.

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$4.00	$4.00	$2.45	$2.45
February	3.50	3.50	2.64	2.45
March	3.50	3.50	2.94	2.64
April	3.15	3.15	2.94	2.94
May	3.15	3.15	3.14	3.14
June	3.15	3.15	3.14	3.14
July	3.15	2.85	3.09	3.09
August	2.85	2.65	3.09	3.09
September	2.65	2.65	3.09	3.09
October	2.65	2.45	3.34	3.09
November	2.45	2.25	3.34	3.34
December	2.45	2.45	3.34	3.34
Year	4.00	2.25	3.34	2.45

Dextrine, Potato, Domestic

On May 24, 1881, the price was 8c.; October 18, 1891, 7c.; 1901, 5½c.; 1911, 5½c.; 1913, 6c.; 1918, July, 20½c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.07½	$0.07	$0.08	$0.08
February	.05½	.05½	.09	.08
March	.07½	.07½	.09½	.09
April	.09	.08	.09¾	.09¼
May	.08	.08	.10	.10
June	.08	.07	.10¼	.09¾
July	.07	.07	.09¾	.09¾
August	.07¾	.07	.10	.09¾
September	.07½	.07½	.09	.09
October	.08¾	.08	.09	.09
November	.08	.08	.08½	.08½
December	.08	.08	.08½	.08½
Year	.09	.05½	.10¼	.08

Divi Divi

On October 18, 1871, the price was $85 per ton; 1881, $70; 1891, $75; 1901, $32; 1911, $45; 1913, $45; 1919, November, $87.

	Per ton			
	1921.		1922.	
	H.	L.	H.	L.
January	$45.00	$35.00	$35.00	$35.00
February	40.00	40.00	35.00	34.00
March	40.00	40.00	34.00	34.00
April	45.00	45.00	34.00	32.00
May	45.00	45.00	32.00	32.00
June	38.00	38.00	32.00	32.00
July	38.00	38.00	37.00	32.00
August	38.00	38.00	37.00	37.00
September	37.00	35.00	37.00	37.00
October	38.00	38.00	38.00	37.00
November	36.00	34.00	38.50	38.00
December	34.00	34.00	38.00	38.00
Year	45.00	34.00	38.50	32.00

Fustic, Sticks

On October 18, 1871, the price was $22 per ton; 1881, $18; 1891, $25; 1901, $22; 1911, $22; 1913, $18; 1918, September, $80.

	Per ton			
	1921.		1922.	
	H.	L.	H.	L.
January	$35.00	$35.00	$35.00	$35.00
February	35.00	35.00	35.00	35.00
March	35.00	35.00	35.00	35.00
April	35.00	35.00	35.00	35.00
May	35.00	35.00	35.00	35.00
June	35.00	35.00	35.00	35.00
July	35.00	35.00	35.00	35.00
August	35.00	35.00	35.00	35.00
September	35.00	35.00	35.00	35.00
October	37.00	37.00	35.00	30.00
November	37.00	37.00	30.00	30.00
December	37.00	37.00	30.00	30.00
Year	37.00	35.00	35.00	30.00

Gambier, Common

On October 18, 1871, the price was 4¾c. per pound; 1881, 3⅞c.; 1891, 5c.; 1901, 5¼c.; 1911, 6¾c.; 1913, 4½c.; 1916, December, 40c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.06½	$0.06	$0.06½	$0.06½
February	.06½	.06	.06¼	.06¼
March	.06	.05½	.06¼	.06
April	.05	.05	.06	.05¾
May	.05	.05	.06	.05½
June	.05	.05	.06	.06
July	.05½	.05	.06	.05¾
August	.05	.05	.06	.06
September	.05¼	.05	.06½	.06¼
October	.06	.05¼	.06½	.06½
November	.06½	.06¼	.06½	.06½
December	.06¾	.06½	.09½	.06½
Year	.06¾	.05	.09½	.05½

Logwood, Sticks, Haitian

On October 18, 1871, the price was $19 per ton; 1881, $18; 1891, $29; 1901, $15; 1911, $15; 1913, $15; 1918, September, $55.

	Per ton			
	1921.		1922.	
	H.	L.	H.	L.
January	$30.00	$30.00	$28.00	$28.00
February	30.00	30.00	28.00	28.00
March	30.00	30.00	28.00	28.00
April	30.00	30.00	28.00	28.00
May	30.00	30.00	28.00	28.00
June	30.00	30.00	28.00	28.00
July	30.00	30.00	28.00	28.00
August	30.00	30.00	28.00	28.00
September	30.00	30.00	28.00	28.00
October	30.00	29.00	28.00	28.00
November	28.00	28.00	28.00	28.00
December	28.00	28.00	28.00	28.00
Year	30.00	28.00	28.00	28.00

Myrobalans

On October 18, 1881, the price was $38 per ton; 1891, $35; 1901, $35; 1911, $23; 1913, $28; 1917, February, $68.

	Per ton			
	1921.		1922.	
	H.	L.	H.	L.
January	$25.00	$21.00	$18.00	$18.00
February	21.00	20.00	18.00	18.00
March	20.00	18.00	18.00	18.00
April	18.00	18.00	18.00	18.00
May	18.00	18.00	22.00	18.00
June	16.00	12.00	22.00	22.00
July	15.00	14.00	22.00	22.00
August	16.00	15.00	22.00	22.00
September	23.00	15.00	22.00	21.00
October	23.00	23.00	23.50	22.00
November	23.00	20.00	23.50	23.50
December	20.00	20.00	23.50	23.50
Year	25.00	12.00	23.50	18.00

Potash, Bichromate

On October 18, 1871, the price was 23c. per pound; 1881, 16c.; 1891, 9⅝c.; 1901, 8¼c.; 1911, 7⅞c.; 1913, 6¾c.; 1917, September, 50c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.15	$0.14	$0.10½	$0.10½
February	.13½	.13	.10½	.10
March	.13	.13	.10	.10
April	.12	.11¾	.10	.09¾
May	.12	.12	.10	.09¾
June	.12	.11½	.09¾	.09¾
July	.11¾	.11½	.10¼	.09¾
August	.11½	.11¼	.10¼	.10¼
September	.11¼	.11	.10¼	.10¼
October	.11	.10½	.10¼	.10
November	.10¾	.10¼	.10	.09¾
December	.10¼	.10¼	.09¾	.09¾
Year	.15	.10¼	.10¼	.09¾

Potash, Prussiate, Yellow

On October 18, 1871, the price was 41c. per pound; 1881, 23c.; 1891, 23¾c.; 1901, 13½c.; 1911, 13c.; 1913, 14c.; 1918, January, $1.30.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.26	$0.26	$0.24	$0.23
February	.26	.26	.25½	.24
March	.26	.26	.26	.25
April	.26	.25	.28	.26
May	.25	.24	.30	.28
June	.25	.22	.32	.31
July	.22	.22	.32½	.32
August	.22	.21	.35½	.32½
September	.21	.19½	.38	.35½
October	.19½	.18½	.37¾	.37¼
November	.21	.20	.41	.37¾
December	.25	.22	.40	.38
Year	.26	.18½	.41	.23

Sago Flour

On October 18, 1871, the price was 8¾c. per pound; 1881, 3¾c.; 1889, 4c.; 1901, 2¾c.; 1911, 2⅝c.; 1913, 2¾c.; 1918, August, 10½c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.04	$0.04	$0.03¼	$0.03¼
February	.04	.03½	.03½	.03¼
March	.03½	.03½	.03½	.03½
April	.03	.03	.03½	.03½
May	.03	.03	.03½	.03½
June	.02¾	.02¾	.03½	.03½
July	.02¾	.02¾	.03¾	.03¾
August	.02¾	.02½	.03¾	.03¾
September	.04¼	.04¼	.03¾	.03¾
October	.03¾	.03½	.03¾	.03¾
November	.03½	.03½	.03¾	.03¾
December	.03½	.03½	.03¾	.03¾
Year	.04¼	.02½	.03¾	.03¼

Soda, Acetate

On October 18, 1871, the price was 58c. per pound; 1881, 40c.; 1891, 33c.; 1901, 4¼c.; 1911, 4c.; 1913, 3¾c.; 1918, July, 35c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.06½	$0.05½	$0.05½	$0.04¾
February	.05½	.05	.05	.05
March	.05	.04¾	.05½	.05
April	.05	.04½	.06	.05¾
May	.04½	.04½	.06	.06
June	.04½	.04½	.06½	.06¼
July	.04¼	.04	.06	.06
August	.04	.04	.06⅞	.06½
September	.04	.04	.07¼	.07
October	.04	.04	.07½	.07¼
November	.04	.04	.07½	.07
December	.04	.04	.06½	.06½
Year	.06½	.04	.07½	.04¾

Soda, Bichromate

On October 18, 1881, the price was 14¾c. per pound; 1891, 8c.; 1901, 6¼c.; 1911, 5⅝c.; 1913, 4⅝c.; 1919, December, 35c.

	Per pound			
	1921.		1922.	
	H	L.	H.	L.
January	$0.08⅞	$0.08½	$0.07½	$0.07½
February	.08¼	.08¼	.07½	.07½
March	.08¼	.08	.07½	.07¼
April	.07⅞	.07⅞	.07¼	.07¼
May	.08	.07⅞	.07¼	.07½
June	.08	.08	.07¼	.07
July	.08	.07⅞	.07	.06⅞
August	.07⅞	.07⅞	.07¼	.07
September	.07⅞	.07½	.07½	.07½
October	.07⅞	.07⅞	.07½	.07½
November	.07¼	.07¼	.07½	.07½
December	.07⅞	.07¼	.07⅞	.07⅞
Year	.08⅞	.07½	.07⅞	.06⅞

Soda, Hyposulphite, Ordinary

On October 18, 1871, the price was $9 per 100 pounds; 1881, $4.50; 1891, $2; 1901, $1.80; 1911, $1.30; 1913, $1.30; 1918, November, $4.10.

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$3.20	$3.20	$2.85	$2.85
February	3.25	3.25	2.85	2.85
March	3.25	3.25	2.85	2.75
April	3.25	3.00	2.75	2.75
May	3.25	3.25	2.75	2.75
June	3.25	3.25	2.75	2.75
July	3.25	3.25	2.75	2.75
August	3.25	3.25	2.85	2.85
September	3.25	3.25	2.85	2.85
October	3.25	3.25	2.85	2.85
November	3.25	3.25	2.85	2.85
December	3.25	3.25	2.85	2.50
Year	3.25	3.00	2.85	2.50

Soda, Phosphate, Commercial

On October 18, 1871, the price was 30c. per pound; 1881, 20c.; 1891, 22c.; 1901, 2½c.; 1911, 2¼c.; 1913, 2¾c.; 1918, January, 7c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.04	$0.03½	$0.04	$0.04
February	.04	.03½	.04	.04
March	.03½	.03½	.04	.03¾
April	.04	.03½	.03¾	.03¾
May	.03½	.03½	.03¾	.03¾
June	.04	.04	.03¾	.03¾
July	.04	.04	.04	.03¾
August	.04	.04	.03¾	.03¾
September	.04	.04	.03¾	.03¾
October	.04	.04	.03¾	.03¾
November	.04	.04	.03¾	.03¾
December	.04	.04	.03½	.03½
Year	.04	.03½	.04	.03½

Soda, Prussiate, Yellow

On December 8, 1889, the price was 25c. per pound; October 18, 1891, 22c.; 1901, 10¼c.; 1911, 10¾c.; 1913, 10½c.; 1918, June, 75c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.17½	$0.16½	$0.17	$0.16
February	.16	.16	.18½	.18
March	.16	.15	.18½	.17
April	.12	.11½	.18	.17½
May	.11½	.11½	.20	.19
June	.12½	.12	.22	.21
July	.12	.12	.21½	.21
August	.12½	.12	.20¾	.20¾
September	.12¾	.12½	.23½	.22½
October	.14½	.12¾	.22½	.22
November	.14⅝	.14¼	.22	.20½
December	.16	.14¼	.20½	.19¼
Year	.17½	.11½	.23½	.16

Starch, Corn

On October 18, 1871, the price was $3 per 100 pounds; 1881, $2.85; 1891, $2.80; 1901, $1.88; 1911, $2.20; 1913, $2.24; 1919, September, $7.25.

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$2.28	$2.28	$1.83	$1.83
February	2.58	2.58	2.12	1.83
March	2.58	2.58	2.12	2.12
April	2.48	2.18	2.32	2.12
May	2.18	2.18	2.47	2.32
June	2.33	2.33	2.47	2.47
July	2.53	2.33	2.47	2.47
August	2.53	2.53	2.47	2.47
September	2.08	2.08	2.57	2.57
October	2.08	1.88	2.72	2.57
November	1.88	1.68	2.72	2.72
December	1.93	1.68	2.72	2.72
Year	2.58	1.68	2.72	1.83

Starch, Potato, Domestic

On October 18, 1871, the price was 3¾c. per pound; 1881, 3½c.; 1891, 3¼c.; 1901, 3¾c.; 1911, 4c.; 1913, 5c.; 1918, April, 15½c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.05	$0.05	$0.05¼	$0.05
February	.05	.05	.05¼	.05¼
March	.05	.05	.05½	.05¼
April	.04½	.04¼	.05¼	.05
May	.04¼	.04¼	.05	.05
June	.03⅞	.03⅞	.05¼	.05
July	.04	.04	.05½	.05¼
August	.04	.04	.05¾	.05½
September	.04¾	.04½	.05¾	.04½
October	.05	.05	.05	.05
November	.05¼	.05	.05	.05
December	.05	.05	.06	.05
Year	.05¼	.03⅞	.05¾	.04½

Starch, Potato, Japanese

On October 18, 1871, the price was 8½c. per pound; 1881, 4½c.; 1891, 3⅜c.; 1901, 4c.; 1911, 4¼c.; 1913, 5¼c.; 1918, April, 16c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.04	$0.04	$0.06	$0.06
February	.04¼	.04¼	.06¼	.06
March	.04½	.04½	.06¾	.06½
April	.04¾	.04½	.07	.06¾
May	.04½	.04½	.07½	.07
June	.04½	.04½	.08½	.08¼
July	.05	.05	.06¾	.06¾
August	.05½	.05	.06¾	.06¾
September	.06	.05¾	.06¾	.06¾
October	.06	.06	.06¾	.06
November	.05¾	.05¾	.06	.06
December	.06	.05¾	.06	.05¾
Year	.06	.04	.08½	.05¾

Starch, Wheat

On October 18, 1871, the price was 8½c. per pound; 1881, 7⅝c.; 1891, 5¼c.; 1901, 4½c.; 1911, 4⅞c.; 1913, 4⅞c.; 1918, December, 12½c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.08½	$0.07¾	$0.06½	$0.06½
February	.07¾	.07¾	.06½	.06½
March	.07¾	.07¾	.06¾	.06½
April	.07	.06¾	.06½	.06
May	.06¾	.06¾	.06	.06
June	.06¾	.06¾	.06¾	.06
July	.06¾	.06½	.06	.06
August	.07	.07	.06½	.06½
September	.07	.07	.06½	.06½
October	.06½	.06½	.06½	.06
November	.06½	.06½	.05¾	.05¾
December	.06½	.06½	.06	.05¾
Year	.08½	.06½	.06¾	.05¾

Sumac, Sicily

On October 18, 1871, the price was $110 per ton; 1881, $75; 1891, $65; 1901, $48; 1911, $51; 1913, $15; 1919, February, $150.

	Per ton			
	1921.		1922.	
	H.	L.	H.	L.
January	$70.00	$70.00	$55.00	$55.00
February	70.00	70.00	55.00	55.00
March	70.00	65.00	55.00	55.00
April	65.00	62.00	55.00	55.00
May	62.00	60.00	55.00	53.00
June	55.00	55.00	53.00	53.00
July	55.00	55.00	53.00	53.00
August	58.00	55.00	53.00	53.00
September	58.00	58.00	53.00	53.00
October	55.00	55.00	53.00	53.00
November	55.00	55.00	55.00	55.00
December	55.00	55.00	55.00	55.00
Year	70.00	55.00	55.00	53.00

Tapioca Flour

On October 18, 1871, the price was 6c. per pound; 1881, 4¼c.; 1891, 4½c.; 1901, 3c.; 1911, 4¼c.; 1913, 3½c.; 1918, June, 18c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.03	$0.03	$0.02½	$0.02½
February	.03	.03	.02½	.02½
March	.03	.03	.02½	.02½
April	.03	.03	.02½	.02½
May	.03	.02¾	.03	.03
June	.02¾	.02¾	.03	.03
July	.02¾	.02¾	.03¼	.03
August	.02¾	.02¼	.03¼	.03¼
September	.02¾	.02½	.04	.03
October	.02¾	.02¾	.04	.04
November	.02¾	.02¾	.04¼	.04
December	.02½	.02¼	.04½	.04¼
Year	.03	.02¼	.04½	.02½

Tin Crystals

On October 18, 1871, the price was 45c. per pound; 1881, 16½c.; 1891, 14c.; 1901, 20c.; 1911, 25½c.; 1913, 27½c.; 1918, September, 70c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.31	$0.30	$0.28½	$0.28½
February	.28½	.28½	.29	.29
March	.28½	.28½	.27½	.27½
April	.30½	.30½	.28	.28
May	.28	.28	.28½	.28½
June	.29	.29	.29½	.29½
July	.28	.28	.29½	.29½
August	.27½	.27½	.29½	.29½
September	.26½	.26½	.29½	.29½
October	.27	.27	.30	.30
November	.27	.27	.31	.31
December	.28	.28	.32½	.32½
Year	.31	.26½	.32½	.27½

Turmeric, Aleppy

On October 18, 1871, the price was 5½c. per pound: 1881, 6½c.; 1891, 4⅞c.; 1901, 5¼c.; 1911, 4¾c.; 1913, 4¼c.; 1918, May, 17c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.07½	$0.07½	$0.06	$0.06
February	.07¼	.07¼	.06	.06
March	.07¼	.07	.06	.06
April	.06¾	.06¾	.06	.06
May	.06½	.06½	.06	.06
June	.05½	.05¼	.06	.06
July	.05⅝	.05½	.06	.05¾
August	.05¾	.05⅝	.05¾	.05¾
September	.06½	.06	.05⅝	.05⅝
October	.06	.06	.06¼	.06¼
November	.06	.05¼	.06¼	.06¼
December	.06	.06	.06¼	.06¼
Year	.07½	.05¼	.06¼	.05¾

Zinc Dust

On March 23, 1881, the price was 15¼c. per pound; October 18, 1891, 7½c.; 1901, 5¾c., 1911, 7¾c.; 1913, 6½c.; 1916, January, 35c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.10¼	$0.10¼	$0.08	$0.08
February	.09½	.09½	.08½	.08
March	.09½	.09½	.08½	.08½
April	.11¼	.11¼	.08½	.08½
May	.11¼	.10½	.08	.08
June	.09¼	.08½	.08	.08
July	.08½	.08½	.08¼	.08
August	.08¾	.08¾	.08½	.08
September	.08	.08	.10	.08¼
October	.08	.08	.10	.10
November	.08	.08	.10¼	.10
December	.08½	.08	.10¼	.10¼
Year	.11¼	.08	.10¼	.08

Dyewood Extracts

Fustic, Solid

On October 18, 1871, the price was 14½c. per pound: 1881, 11c.; 1891, 9¼c.; 1901, 8⅝c.; 1911, 8c.; 1913, 8c.; 1916, January, 55c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.22	$0.22	$0.14	$0.14
February	.22	.22	.14	.14
March	.22	.22	.14	.14
April	.18	.18	.14	.14
May	.18	.18	.14	.14
June	.16	.16	.14	.14
July	.15	.15	.14	.14
August	.15	.15	.14	.14
September	.15	.15	.14	.14
October	.15	.15	.14	.14
November	.15	.14	.14	.14
December	.14	.14	.14	.14
Year	.22	.14	.14	.14

Fustic, Crystals

On October 18, 1871, the price was 12½c. per pound; 1881, 11c.; 1891, 9½c.; 1901, 8c.; 1911, 8c.; 1913, 6c.; 1916, January, 60c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.25	$0.25	$0.22	$0.22
February	.25	.25	.22	.22
March	.25	.25	.22	.22
April	.25	.25	.22	.20
May	.25	.25	.20	.20
June	.25	.25	.20	.20
July	.24	.24	.20	.20
August	.24	.24	.20	.20
September	.24	.24	.20	.20
October	.24	.24	.20	.20
November	.24	.22	.20	.20
December	.22	.22	.20	.20
Year	.25	.22	.22	.20

Logwood, Solid

On October 18, 1871, the price was 9¼c. per pound; 1881, 8¼c.; 1891, 7¼c.; 1901, 8c.; 1911, 6c.; 1913, 6c.; 1916, January, 90c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.14¾	$0.14¾	$0.14¾	$0.14¾
February	.14¾	.14¾	.14¾	.14¾
March	.14¾	.14¾	.14¾	.14¾
April	.14¾	.14¾	.14¾	.14¾
May	.14¾	.14¾	.14¾	.14¾
June	.14¾	.14¾	.14¾	.14¾
July	.14¾	.14¾	.17	.15½
August	.14¾	.14¾	.17	.17
September	.14¾	.14¾	.17	.16
October	.14¾	.14¾	.16	.16
November	.14¾	.14¾	.16	.16
December	.14¾	.14¾	.16	.16
Year	.14¾	.14¾	.17	.14¾

Quebracho, Solid

On August 16, 1881, the price was 4¼c. per pound; October 18, 1891, 3½c.; 1901, 4¾c.; 1911, 4¾c.; 1913, 4¾c.; 1916, January, 20c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.05½	$0.05	$0.04½	$0.04½
February	.06	.06	.04¾	.04½
March	.06	.06	.04¾	.04½
April	.05½	.04¾	.04¾	.04¾
May	.04¾	.04¾	.04¾	.04¾
June	.04¾	.04¾	.04¾	.04¾
July	.04¾	.04¾	.04¾	.04¾
August	.04¾	.04¾	.04¾	.04¾
September	.04½	.04½	.04¾	.04¾
October	.04½	.04½	.05	.04¾
November	.04¾	.04½	.05	.04¾
December	.04¾	.04¾	.04¾	.04¾
Year	.06	.04½	.05	.04½

Quercitron, Solid

On October 18, 1871, the price was 2c. per pound; 1881, 7c.; 1891, 6½c.; 1901, 3c.; 1911, 2¾c.; 1913, 2¾c.; 1916, January, 30c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.12	$0.12	$0.09	$0.09
February	.12	.12	.09	.09
March	.12	.12	.09	.09
April	.10	.10	.08	.08
May	.10	.10	.09	.09
June	.10	.10	.09	.09
July	.10	.09	.09	.09
August	.09	.09	.09	.09
September	.09	.09	.09	.09
October	.09	.09	.09	.09
November	.09	.09	.09½	.09
December	.09	.09	.09½	.09½
Year	.12	.09	.09½	.08

Sumac, Sicilian, Stainless

On January 12, 1877, the price was 6c. per pound; October 18, 1881, 5¼c.; 1891, 6¼c.; 1901, 7c.; 1911, 6½c.; 1913, 8c.; 1919, May, 16c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.14½	$0.14½	$0.10¼	$0.10¼
February	.14½	.14½	.10¼	.08¾
March	.14½	.14½	.08¾	.08¾
April	.13	.13	.08½	.08¾
May	.13	.12	.08½	.08½
June	.12	.12	.08½	.08½
July	.12	.12	.08½	.08½
August	.12	.12	.08½	.08½
September	.12	.12	.08½	.06¼
October	.12	.12	.06¼	.06¼
November	.12	.12	.06¼	.06¼
December	.12	.12	.06¼	.06¼
Year	.14½	.12	.10¼	.06¼

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Paint and Varnish Materials: Market Review

The paint and varnish industry marked a definite and ambitious goal for itself last year. It announced to the world that it intended to make 1922 the greatest paint and varnish year. It organized and worked to that end, and 1922 saw peak production of finished paints and paint materials; yet, so great was consumption, that stocks in all hands were materially less at the end of the year than the beginning.

There were a number of contributory causes that resulted in the achievement of the aim of the industry. In the first place, the fact that the whole industry was workin~ with a definite end in view is not to be overlooked as one of the prime factors in making last year a great business era for those who make and sell paints and varnishes. The industry did not hide its light under a bushel. It not only pushed two well organized publicity campaigns for the extension of paint consumption, but it was active in many other ways, and the firms and individuals in the trade did not allow constructive work intended to aid the industry as a whole to interfere in any way with their personal activities in pushing their own business. Many of the great corporations in the industry expended more money in trade development than they had ever done before—and they found this expenditure most profitable. Never before in this or any other country were the preservative functions of the paint brush exploited as they were in the United States last year. The natural result was that there was much more than a normal amount of repainting done.

The past year was a very busy time in the automobile and many other of the great paint consuming industries. There was a very heavy consumption of paints and varnishes by manufacturing establishments. It was not only house paints that were in active demand during the year, but paints and varnishes for all sorts of purposes.

There can be no doubt, however, that it would not have been possible for the year to have broken all records for the paint industry had it not been for the record breaking amount of new construction work in practically every section of the United States. The fact that it was the greatest building year ever known, made it possible for 1922 to be the greatest paint and varnish year.

Not only was last year the greatest ever known in the building world, but its record of construction activity went far beyond those of any previous twelve months. It is estimated that the total cost of the new construction work started in this country during 1922 was $4,250,000,000. Although the previous year had been a busy period in the building industries, the total for 1922 was about 42 per cent. greater than that of 1921. It is not possible to do this amount of building in a year without making a record breaking demand upon the paint industry.

The character of the new building last year was such as to call for a liberal expenditure for paints in proportion to the total costs. There is no other class of building that requires as much paint in proportion to the total cost as do frame residences, and the building of this class of structures was the feature of last year's construction activities. New residences represented 40 per cent. of the total of the four and a quarter billion dollars expended in new buildings. Much of the painting on buildings commenced last year will be done this year, so that the vast amount of new building started last year will have quite as much influence on paint consumption during 1923 as during 1922.

Industry Is Expanding

The paint industry in this country is going through a period of rapid expansion, and in many lines there was a decided increase made in production capacity during the last year. There was also a great deal of overtime work, many plants being operated day and night during a large part of the year.

Aside from foreign earths and some other natural materials, imports of foreign paint materials into this country no longer amount to much. Pigments and colors which before the war were imported in large quantities are no longer brought in in quantities to make them a factor in the market. Naturally since the new tariff law went into effect imports have been less than before. Some large consumers of lithopone who early in the year bought in large quantities of Belgian material discontinued importing, temporarily at least, as soon as the new law became operative.

At the beginning of the year there was some scattered suggestion that the only manner in which record breaking consumption could be assured would be by price cutting. This, however, did not prove to be exactly an accurate forecast of the situation; for, although it proved a year of record breaking consumption it was not a period of declining prices. There was a manifest disposition on the part of producers not to allow the fact that demand was good to influence them in price naming, but in a number of instances there was such radical increases in raw material costs that they could not be ignored. Taking it as a whole, the year was a period of gradually increasing prices in the entire paint industry. That these advances were not great enough to curtail demand is eloquently proven by the fact that consumption broke records. It might be mentioned that some of the most marked advances occurred in materials which were in such great demand that producers were behind in their deliveries during a large part of the year. The sensational advance that occurred in the price of pig lead forced all lead pigments up very sharply, and yet producers of white lead found it difficult to keep up with the demands of consumers, although plants were worked to capacity limit all year.

During the early part of the year there were few price advances, and in some lines the course of price fluctuations continued downward. Lead pigments began to advance during the second quarter of the year, and at the middle of the year a number of makers mixed paints advanced their prices, although others did not follow this lead. As late as August there were some downward revisions in paint material prices, for in that month there was a sharp reduction in the prices of all leaded zinc oxides. That was the last important price decline of the year, but while many prices were advanced during the second half quite as many held unchanged. Only a few minor paint materials advanced as soon as the new tariff became effective, and in some lines of imported materials upon which the duty was increased there has never been an advance because the increase was offset by the decrease in the values of foreign exchange.

Costs Stayed High

There was little or no opportunity for manufacturers to reduce labor costs and overhead expenses during the year; although it is cheaper to produce when plants are working at capacity than when they are being operated part time, and this fact alone prevented price advances in a number of instances. The industry did not become over-enthusiastic because it was doing a large volume of business, and it did not allow this fact to cause it to lose its sense of perspective. The margin between actual production costs and selling prices was not expanded and the whole industry sought business expansion rather than excessive profits.

One reason why the industry did not grow excited over the fact that business was good was because it was realized that it should be better. If an industry is selling all the horse shoe nails that there are horse shoes for the nails to hold in place that is is all it can do; but the paint industry realizes very well indeed that it is not selling paint enough to cover all the surfaces that are in desperate need of paint and that while sales last year were good, this country did not buy nearly as much paint as it should have bought. Undoubtedly much more paint could have been sold and consumed if it had not been for the scarcity and high cost of labor to apply the paint. Slight advances in paint prices made comparatively little difference to ultimate consumers when cost of the paint was but a small fraction of the cost of its application. In some sections it was impossible during a large part of the year to secure an adequate supply of competent labor to do the painting for which the demand was pressing. Undoubtedly if labor had been cheaper and more plentiful there would have been a much greater demand for paints last year than there was.

Taking the year as a whole, it was a period of prosperity for the paint industry of this country. No American industry is doing a normal business unless it is doing a greater business each year than it ever did before. This the paint industry did during 1922, and therefore it can be said that it did a normal business. Those in the business can see many ways in which business could have been better and many conditions which might have been improved, but the fact remains that it was the greatest year in the paint and varnish industry, and that therefore the industry made good on its promise to itself and the whole world at the beginning of the year. Naturally it is expected that 1923 will be better than 1922. To be a normal year it also must break records.

Lead

At the beginning of the year the price of common pig lead in the New York market was 4.70c. per pound. It had advanced to that level the previous fall, after having sold as low as 4c. a pound during 1921. In April this metal started advancing and the end of the year found the price still climbing. The advance from April to December amounted to 2.55c. a pound, or 54.25 per cent of the April price. Naturally this advance caused higher prices wherever lead was used as a raw material, and the paint industry has felt the effects of this advance to no small extent. Only in the last days of the war was pig lead ever higher and scarcer than it was at the end of 1922. During the war the New York price went to 8.05c. a pound, but during the early part of the war it was as low as 6.25c. and the advance came only after a long continued enormous consumption for war purposes. Since the war, however, the price of lead has been most irregular. It jumped to 9.25c. in 1920, and broke to 4c. in 1921.

The demand for lead during the first quarter of last year was slow, but this did not bring about any accumulation of supplies in first hands, and as soon as the demand improved the price began to move up sharply. The demand seemed to be greater than the supply, and the market became firmer as it went higher. Some large consumers bought very heavily around the five-cent level, and again several months later around the six-cent level. The price went up so rapidly that the advance was a very profitable one to large consumers who always carry about six months' supply on hand. There was no reaction in sight when the year ended with the price the highest since October, 1920. In 1920 the market broke from 9c. in October to 5.25c. in December, but during the same period last year the market was working higher.

Zinc

The price of zinc was a little lower in February than it was at the beginning of the year; but in March it began to climb and it kept on climbing for the rest of the year. The price at the end of the year was 2:50c. a pound greater than the low of February. It worked from 4.85c. a pound in the New York market to 7.35c. a pound. The market was a dull affair at the beginning of the year, and stocks in first hands were large. Production had been curtiled because of the slack demand, and when there came a sudden improvement in both the domestic and the export demand it was difficult to get domestic production back to normal again.

When stocks in producers' hands began to dwindle the price began to advance. At the end of the year stocks in the hands of American producers totaled 18,252 tons, which was 48,356 less than they had on hand at the beginning of the year. There was a constant increase in production as the price climbed, and the production during the last month of the year, which totaled 48,590 tons, was the largest for any month since May, 1920. As the year closed the effect of the increase in production had begun to be felt in the market, but it had not been felt enough to cause any price reduction.

The advance in the price of zinc did not affect the paint industry, as did the advance in the price of lead; and both the zinc oxide and lithopone makers ignored it to a very great extent.

Barytes

The price of barytes did not advance as soon as the new tariff law went into effect. Producers did not alter their quotations until they were forced to do so by the altered conditions of the market as a result of the passage of the McCumber-Fordney bill. Under the new law the duty on ground barytes was fixed at $7.50 a ton, the old duty being 20 per cent. ad valorem. It was not this increase, however, that forced an advance in the price of domestic ground and washed material.

Lithopone makers and other consumers of crude barytes had been heavy importers before the new law went into effect and the duty on crude was increased from 15 per cent. ad valorem to $4 a ton. This was equivalent to about 100 per cent. ad valorem and increased the demand for crude material in this country to such an extent that producers of manufactured barytes were forced by increasing production costs to increase the price from $23 per ton at the works to $26. This advance was not made until November, although the new tariff law went into effect in September. This was the only price change during the year. The one change made during the previous year was the reduction of $1.50 a ton made in August, 1921.

As was the case with paint materials of all sorts, consumption of this material during the year was along liberal lines. Producers, however, had their own troubles, chief among which was the poor railroad service, and the character of the cars furnished them, many of which could not be used at all and others of which broke down en route.

Lead Pigments

At the beginning of the season some of the best posted men in the business expressed grave doubts as to whether it would be possible to market more white lead in 1922 than had been sold in 1921. The year 1921 had been a record breaker in the white lead business and the demand had been for all that could be produced, so that it seemed the only way in which business could be increased was by increasing production. Early in the year it was found that the demand was greater than at the same time during the previous year, and the pressure was kept on to the end. Much of the time producers were far behind with deliveries, and there were practically no stocks on hand at the end of the year. This was an almost unprecedented situation, as under normal conditions producers always accumulate stocks during November and December, the winter's accumulation being needed to take care of the demands of spring consumption.

The great demand for white lead during 1921 was stimulated by the fact that decreasing cost of production made it possible for corroders to lower their prices during the year. The price of white lead, dry in casks, was 1½ cents a pound lower at the beginning of 1922 than it was at the beginning of 1921. There was a radical change in conditions last year, however, and the record-breaking business was done in spite of the fact that prices of lead pigments were advancing steadily after the end of the first quarter. The price of pig lead had stopped declining and started to climb, and with it went prices of lead pigments.

A great deal more promptness was shown in marking prices up than there was in lowering them when lead was going down; "replacement costs" is a term much used when raw material prices are advancing and seldom used when they are declining. There was an advance in April and another in May, another in September and another in November. The price of white lead, dry in casks, was a cent and a half a pound higher at the end of the year than it was at the beginning of the year. The price of white lead in oil, in carload lots, as quoted by the leading producers, was 1.01c. a pound higher at the end of the year than at the beginning, which was not a great advance considering what occurred during the period in the pig lead market.

One thing is certain and that is that the increasing cost did not in any way curtail the consumption of white lead during 1922. During the last two months of the year the leading corroders were not making an effort to book business for forward delivery, but were concentrating their attention upon an effort to catch up with deliveries.

Plants producing white lead were operated to capacity during the entire year, and practically all producers increased the limit of the production capacity during the twelve months. It was a year of good business in all branches of the paint industry, but the demand for white lead in oil was so great that it was perhaps the most outstanding feature of the year's history in the paint trade.

The fluctuations in white lead, basic sulphate, followed those of basic carbonate very closely, and there was a very good demand for this material all year, although its activity was not to be compared with that for basic carbonate.

The demand for red lead and the other oxides had been very poor during 1921 and was slow during the first quarter of 1922. Later it began to improve, and this improvement was steady during the rest of the year, in spite of the fact that prices were working higher. There was a very much larger consumption of red lead as a cover for exposed metals during 1922 than during the previous years. The railroads called for more, and the oil industry was a very heavy consumer. There was a very heavy wartime consumption of red lead, and, while white lead consumption for the year broke all records last year, this was not to be expected as far as red lead was concerned. After the war the business slumped so greatly that for a long time the market was demoralized. Last year great strides were made towards a return to normal. Production was increased during the year to meet the increasing demands of consumption, and the carry-over in first hands at the end of the year was much less than they had on hand at the beginning of the year.

The same conditions which forced white lead higher operated to increase the cost to consumers of lead oxides, and there were more frequent advances in red lead during the twelve months than there were in white lead. There was a ½c. a pound advance in April, ¼c. in May, ¼c. in June, ¼c. in September, .15c. in October, ½c. in November and ½c. in December; the entire

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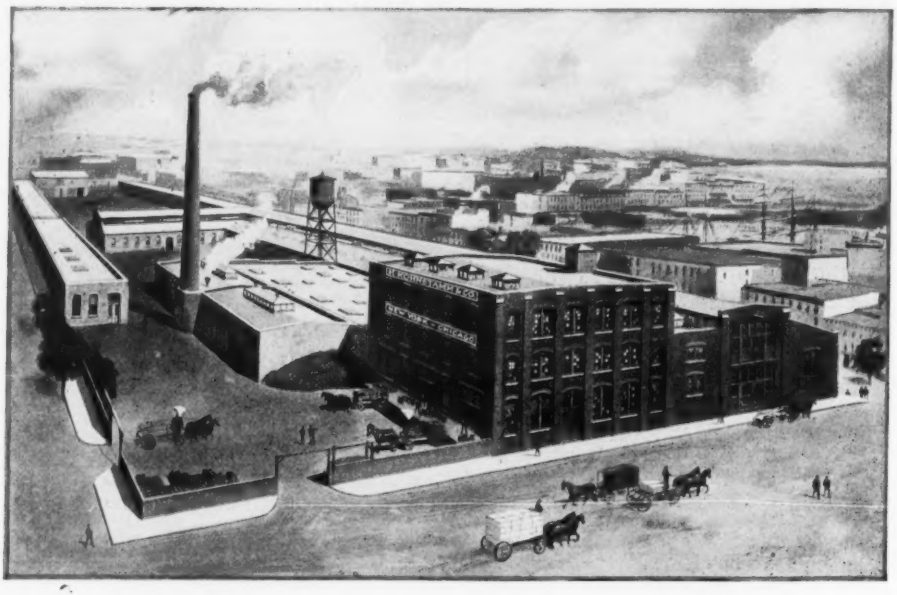

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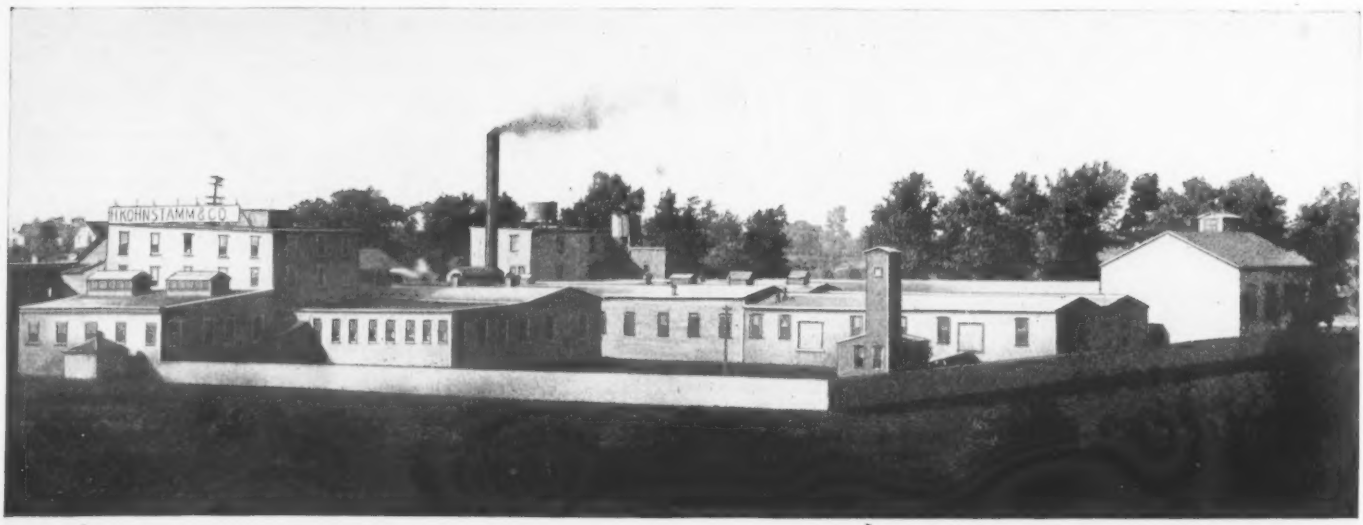

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MAR 30 1923

advance for the year in dry red lead, in casks, amounting to 2.15c. a pound.

What has been said of the red lead market applied in the main to those of other lead oxides. There was a marked improvement in the call for litharge during the year. Litharge is used by colormakers, glassmakers, varnishmakers, rubbermakers, buttermakers and oil refiners among others, and all of these consumers were doing a better business during 1922 than they did during 1921, so it was natural that there should have been a decided improvement in the demand for this material. During the first quarter of the year litharge, in carload lots, was quoted at 9.92c. a pound. During the summer the ruling price was 10.12c. In September there was an advance to 10.32c., in November to 10.73c. and in December to 10.93c. The total advance for the year was 1.01c. a pound.

Lithopone

The demand for lithopone last year was by far the greatest ever known in this country. During practically the entire year the leading domestic producers were operating their plants day and night and the end of the year found them with practically no stocks on hand and orders on their books for all they could produce for months to come. In the past producers have always carried over large stocks at the end of the year, but these stocks have never been so large that they were not all needed to meet the demands of spring consumption. The increased consumption of this pigment since the war has been one of the most remarkable features of the development of the paint industry, and one of the reasons for this is undoubtedly the fact that there has been such a great improvement in the character of the material made in this country.

When the manufacture of lithopone was first attempted in this country so little success was met with that it was found necessary to import German chemists and German methods before an even fairly satisfactory product was obtained. Now American makers consider German methods of production entirely unsatisfactory, and German lithopone imported since the war has not been able to compete with the domestic material. There is good lithopone made in Belgium, however, and there were very heavy imports of Belgian lithopone into this country before the new tariff law went into effect. This material was for the most part imported by large consumers inside and outside of the paint industry, and very little of it was offered in the open market in competition with domestic material. The new tariff law increased the duty on lithopone from 15 per cent. ad valorem to 1¾c. a pound, and since the law went into effect there has been but little foreign lithopone brought into this market.

While the new tariff law increased the duty on lithopone is also increased the cost of the production of domestic material by increasing the duty of crude barytes, one of the basic raw materials in the manufacture of lithopone, which had been imported in large quantities by lithopone manufacturers. The cost of production of this material was materially increased during the year by the advance in the price of zinc. Lithopone as marketed contains 20 per cent. of metallic zinc, but the methods of manufacture necessitates the use of about 25 per cent. of metallic zinc by weight, of the weight of the finished product. This means that in four pounds of lithopone one pound of zinc is used, and there was an increase of 2.15c. a pound, or 40 per cent. in the price of zinc during the year.

In spite of increasing costs of raw material the price of lithopone held steady during practically the entire year. When a slight advance was made in November all the business for 1922 had been booked, and most makers had sold ahead to the limit of their capacity far into the coming year. For this reason it might be said that the price was unchanged all year in spite of the unusual demand and higher priced barytes, zinc and an increase in tariff duties. One reason for the stability of the market was the fact that there was a great deal of keen competition between domestic makers, and another was that the fact that plants were operated 24 hours a day in many cases had a tendency to hold down production costs, as it is cheaper to operate to capacity that to produce when production is curtailed. The volume of business the makers were doing moreover, made it possible for them to operate on smaller than the usual margin of profit. It was the relative cheapness of the material that had much to do with the increase in the demand for it.

During the year the high for car lots in barrels was 6½c. a pound, and the low 6c., part of this difference representing the spread in the quotations of different makers. While this is much higher than the pre-war level of the market, it might be mentioned that pre-war lithopone did not compare with what is being produced today. The price of lithopone from 1910 to 1915 was fairly steady at about 3½c. to 3¾c. a pound. During the war the price increased rapidly and reached the peak in 1916 at 14½c. to 15½c. a pound. From 1917 to 1921 the price fluctuated at from 6½c. to 8c. a pound.

Zinc Oxide

Price fluctuations in the zinc oxide market during 1922 were few and far between. There were no price changes at all during the first half of the year. During that period there was a good demand for French process oxides, the demand from the tire and rubber industries being very good. There was not a good demand from the paint industry for leaded zinc oxides, however, and early in August there was a reduction of ½ cent a pound in American process, commercially lead free, and of a cent a pound in leaded grades. This was a very radical move on the part of producers, as production costs had increased rather than declined during the first half of the year. Competition may have had something to do with the price slashing, but the leading producers said that they reduced prices simply because they wished the material to move more rapidly.

During the last half of the year there was a very good demand for all grades. The tire and other industries were liberal buyers of French process oxides, and the prices of leaded zincs proved attractive to the paint industry. It is the custom of the largest producers in this line to at any time accept business for delivery during the next six months, and during the last quarter of 1922 there was a great deal of business booked for 1923 delivery. The reduction in the price of leaded zinc naturally stiumlated the demand for them, and there was no further price changes until the last business day of the year, when there was an advance of ½ cent a pound on all grades. There was, of course, no business booked during 1922 at this end-of-the-year advance, but it was a reflection of the good demand for all grades of zinc oxide during the last quarter of the year.

Dry Colors

There was a good demand for dry colors during a large part of the year, the fall demand being relatively better than that of the spring. Prices held steady. There were some advances and some declines, but, taken as a whole, there was but little change in the price level during the year. The demand for some of the most used chemical colors had not been good during the previous year, and stocks in first hands were rather large at the beginning of the year. In addition to this many plants were being operated at considerable less than capacity production. So good was business during the year that stocks at the end of the year were much smaller than at the beginning, although production was very materially increased during the year. During the latter part of the year many large producers had difficulty in keeping up with deliveries in many lines.

During the early part of the year there was a great deal of price cutting in the chrome yellow and some other markets, and colors were sold so close to the cost of production that makers declared that there was no money in the business. There were increases in the prices of a number of raw materials, and these advances were largely ignored by the dry color market. During the last quarter of the year there was a steadier tone to the market for all sorts of chemical colors, and a very active demand for most of them.

At the beginning of the year iron blues were selling at 50 cents a pound, but in May some producers named a 60-cent price because of the advance that had occurred in yellow prussiate of soda. It was not possible for the market to make as great an advance as this, however, and some producers never made any pretense of asking more than 55 cents. The market held at the 55-cent level during the latter part of the year, and the demand was good. Some makers made an effort to advance the price of chrome greens at the same time iron blues began to firm, but it was difficult to induce all makers to make an advance, in spite of increased production costs, so that chrome greens held at the same level all year. Chrome yellows were much slashed during the early part of the year, and many reports were circulated as to how low chrome yellow could be bought. There was an active demand, however, and a much steadier tone to the market during the last quarter of the year.

The demand for carbon gas black, both for domestic consumption and for export, was very good from one end of the year to the other. Producers had a great deal of trouble on account of the poor railroad service, but managed to keep their consumers supplied, although the demand was fully up to production. There was a sharp advance in prices of carbon gas black about the end of the first quarter, and at no time during the year was the market firmer than at the close. Other blacks held very steady, but were not under the same pressure as was carbon gas.

There was an excuse for an advance in the prices of foreign earths when the new tariff law went into effect, as the duty on them was increased. No such advance occurred, however, as just at this time there was a weakness in foreign exchange that offset the advance in the duty. There was a good market for all sorts of foreign earths, but natural colors were about the only sort that were brought in from the other side in any quantities. American chemical colors are now equal to any made abroad and so greatly superior to most that has been imported since the war that there has come to be very little brought in. There was a very active demand for Spanish oxide all year, and it was difficult for importers to get as much of the highest grade material as the demands of consumers called for. Never before was the demand for this material as active as it was during 1922. There was a very good demand all the time for the more popular reds, but the only one in which there were wild price fluctuations was English vermilion. The basic raw material for this color is quicksilver, and the great advance that was seen in quicksilver last year caused a most sensational market in English vermilion. At the beginning of the year it was selling at 85 cents a pound, and by the end of the year the price had advanced to $1.35. There are some consumers who must have this color, but they are outside of the paint industry. There was a good demand even at the season's highest level.

The spring demand for paris green was so good that stocks were well cleaned up. When it is considered that some makers had practically a whole season's supply on hand at the beginning of the year it can be seen how great was the call for this popular insecticide.

Other Paint Materials

One of the most remarkable advances seen in any sort of material during the year occurred in the casein market. For the first time this material was taken off the free list by the new tariff law, which placed a duty of 2½ cents a pound on imported casein. The advance which occurred was started when this provision was inserted in the bill, it not having originally been in it. It was not a 2½ cents a pound duty that caused the advance. It required a casein famine to cause the advance which occurred. Domestic production had been curtailed because of a poor demand the previous year, and when the demand suddenly became very good there was not enough domestic and imported material to supply it, and during the last few months of the year there was no casein offering on the spot. The price advanced from 8 cents to 20 cents a pound before the spot market was exhausted, and had there been any offering late in the year it could have been sold much higher than 20 cents.

There was a good demand for both imported and domestic china clay, and the domestic market stiffened up early in the year from a somewhat demoralized condition that had resulted in price cutting. There was an advance of $1.25 a ton in the price of imported when the new tariff law went into effect, that being the amount of the increase in the duty on this material.

There was a fairly good demand for cobalt oxide, and a slight advance in the price as a result of the passage of the new tariff bill, which increased the duty from 10 cents to 20 cents a pound.

Fuller's earth, both imported and domestic, was in good demand. Prices held steady. Most of the imported went to cottonseed crushers, while the big demand for domestic came from petroleum refiners. The year was a record breaker in the petroleum business, and some of the domestic producers had sold their entire 1923 production before the end of 1922.

The leading makers of putty held their prices practically unchanged during the entire year, although there was some increase in production costs and a very active demand all year. While definite figures are not available, consumption of putty in this country during the year was undoubtedly larger than ever before.

Importers of French and Italian talc did a very good business, and there was also a very good demand for domestic. Domestic could be bought a little cheaper during the last quarter of the year than during the first quarter. An increase in the duty caused an advance in the prices on imported material.

Whiting was not quite as high at the end of the year as it was at the beginning, although there was a very good demand.

Varnish Gums

The greatest interest in the varnish gum market is always in Batavia dammar, and this gum easily held the center of the stage during the entire year. At the beginning of the year it was quoted at 27 cents a pound, but this price did not hold long. Stocks in importers' hands at the beginning of the year were small and as soon as the spring demand started the price began to climb. Before the advance was over Batavia dammar had sold as high as 35 cents, but late in the year there was a reaction and during the last month of the year it was offered at 29½ cents, making the net advance for the year only 2½ cents a pound. Singapore No. 1 advanced at the same time as Batavia dammar, and after these grades had made their highs for the year there was also an advance in Singapore No. 2. There was little change in importers' quotations on the less popular gums, and the prices named depended to an extent upon the stocks the seller happened to have on hand. During the latter part of the year there was an increase in the interest in kauri gums, but during a large part of the year interest was largely centered in dammars.

There was a stronger tone shown in the Far Eastern markets during the entire year than during the previous year, and American importers showed little disposition to attempt to anticipate the demands of consumers, so that stocks in importers' hands at the end of the year were hardly up to normal and in some lines they were very small.

Glues

There was a much more satisfactory condition of affairs in the glue market from the standpoint of the producers at the end of the year than there was at the beginning. There had never been a satisfactory market since the war until the improvement was seen during 1922. The demand during the first quarter was not particularly good, but there was a gradual improvement during the year, and the fact that the duty on foreign glues was increased by the new tariff law stiffened the market.

In many consuming lines the demand was not active enough to indicate that consumption was back to normal, but there was a general improvement that would have been greater than it was had it not been for the railroad situation. During the latter part of the year packing house producers advanced their prices on common bone glues about 2 cents a pound, and the cheaper grades were rather stronger than the higher priced ones.

Window Glass

The year was a very good one for American makers of window glass. Although there was a good deal of foreign glass imported, especially before the new tariff law went into effect, there was a demand for domestic so active that there was little chance for stocks to accumulate in first hands, and jobbers were often unable to make prompt deliveries on popular sizes. There was no let-up, after the spring demand got fairly underway, and shipments from the factories during the last month of the year broke all records for that month, in spite of the fact that poor railroad service was something the industry suffered a great deal from. The record breaking amount of new construction work commenced during the year was the reason why the window glass makers enjoyed perhaps the best year they had ever known, and stocks in first hands at the end of the year were very small, indeed, while makers had booked a great deal of business for 1923 delivery.

The custom in the window glass business is to hold quoted prices unchanged, and make market changes by altering discounts. The first change in prices of the year was a reduction; it was made in January. This cut was estimated to have amounted to an average of 22 per cent. on all grades of glass. A large part of the business of the year was done at these prices. After the passage of the tariff bill there was an advance in prices. This took place about the middle of October, and the change in discounts made at that time meant an advance of about 10 per cent., so that prices at the end of the year showed a net reduction of between 10 and 12 per cent.

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Paint and Varnish Materials: Record of Prices

Metals

Pig Lead

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.0475	$0.0475	$0.047	$0.047
February	.0475	.046	.047	.047
March	.041	.04	.047	.047
April	.044	.041	.0525	.047
May	.05	.045	.0565	.0525
June	.05	.044	.0575	.0565
July	.044	.044	.0575	.0565
August	.044	.044	.0595	.0575
September	.047	.044	.0635	.0595
October	.047	.047	.0650	.0635
November	.047	.047	.0710	.0650
December	.047	.047	.0725	.0710
Year	.05	.04	.0725	.047

Zinc

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.06	$0.056	$0.052	$0.0495
February	.053	.053	.0485	.0485
March	.0515	.05	.05	.049
April	.0515	.05	.0535	.05
May	.051	.05	.056	.0535
June	.051	.0475	.0565	.056
July	.0475	.045	.0635	.0565
August	.045	.044	.0665	.0665
September	.044	.042	.0725	.0675
October	.0495	.049	.0735	.0725
November	.0505	.0495	.0735	.0725
December	.052	.0505	.0735	.0730
Year	.06	.042	.0735	.0485

Pigments

Barytes

On October 18, 1871, the price was 1⅞@2¼c.; 1881, $21@25 per ton; 1891, $18@20; 1901, $17@20; 1911, $18.50@20.50; 1913, $19@20; 1920, August, $40.

(Western f.o.b. works.)

	1921. H.	1921. L.	1922. H.	1922. L.
January	$24.50	$23.50	$23.00	$23.00
February	24.50	24.50	23.00	23.00
March	24.50	24.50	23.00	23.00
April	24.50	24.50	23.00	23.00
May	24.50	24.50	23.00	23.00
June	24.50	24.50	23.00	23.00
July	24.50	24.50	23.00	23.00
August	24.50	23.00	23.00	23.00
September	23.00	23.00	23.00	23.00
October	23.00	23.00	23.00	23.00
November	23.00	23.00	26.00	23.00
December	23.00	23.00	26.00	26.00
Year	24.50	23.00	26.00	23.00

Blanc Fixe, Dry

On July 21, 1880, the price was 3½c.; October 18, 1881, 3¼c.; 1891, 2⅝@3c.; 1901, 2½@2¾c.; 1911, 2⅞@4c.; 1913, 2⅞@4c.; 1920, August, 6½c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.05½	$0.05	$0.04½	$0.04
February	.05½	.05	.04¼	.04
March	.05	.04	.04¼	.04
April	.05	.04	.04¼	.04
May	.05	.04	.04½	.04¼
June	.05	.04	.04½	.04¼
July	.05	.04	.04½	.04¼
August	.04½	.04	.04½	.04¼
September	.04	.03¾	.04½	.04¼
October	.03¾	.03½	.04½	.04¼
November	.03¾	.03½	.04½	.04¼
December	.04½	.04	.04½	.04¼
Year	.05½	.03½	.04½	.04

White Lead, Basic Carbonate

On October 18, 1871, the price was 10@10¼c.; 1881, 6¾@7c.; 1891, 6¾@7½c.; 1901, 4¾@6c.; 1911, 5½@6c.; 1913, 5¾c.; 1917, July, 11½c.

(Dry, in casks.)

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.09	$0.08	$0.07½	$0.06½
February	.08	.08	.07½	.06¾
March	.08	.08	.07½	.06¾
April	.08	.07½	.07¾	.06¾
May	.08	.07½	.08	.06¾
June	.08	.07½	.08	.07¼
July	.08	.06½	.08	.07¼
August	.07½	.06½	.08	.07¼
September	.07½	.06½	.08¼	.07¾
October	.07½	.06½	.08¼	.07¾
November	.07½	.06½	.08¾	.08
December	.07½	.06½	.08¾	.08
Year	.09	.06½	.08¾	.06½

White Lead, Basic Carbonate, in Oil

On October 18, 1871, the price was 11½c.; 1881, 7¼@7½c.; 1891, 6¾@7½c.; 1901, 5¾@6½c.; 1911, 7¼@7½c.; 1913, 7¼c.; 1917, July, 11½c.

(Carload lots.)

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.1134	$0.1053	$0.0992	$0.09125
February	.1053	.1053	.0992	.09125
March	.1053	.0987	.0992	.09125
April	.1053	.0987	.0992	.09125
May	.1053	.0987	.1012	.09125
June	.1053	.0987	.1012	.09375
July	.1053	.09125	.1012	.09375
August	.0992	.09125	.1012	.09375
September	.0992	.09125	.1032	.09875
October	.0992	.09125	.1032	.09875
November	.0992	.09125	.1073	.10⅜
December	.0992	.09125	.1093	.10⅜
Year	.1134	.09125	.1093	.09125

White Lead, Basic Sulphate

On December 7, 1909, the price was 5⅜@6c.; October 19, 1911, 5⅜@5½c.; 1913, 5½c.; 1917, August, 11c.

(Dry, in casks.)

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.08¼	$0.07¼	$0.07	$0.06¾
February	.07½	.07¼	.07	.06¾
March	.07½	.07¼	.07	.06¾
April	.07½	.07¼	.07¼	.06¾
May	.07½	.07½	.07½	.06¾
June	.07½	.07½	.07½	.07¼
July	.07½	.06¾	.07½	.07¼
August	.07	.06¾	.07½	.07¼
September	.07	.06¾	.07¾	.07½
October	.07	.06¾	.07¾	.07½
November	.07	.06¾	.08¼	.07¾
December	.07	.06¾	.08¼	.07¾
Year	.08¼	.06¾	.08¼	.06¾

Red Lead

On October 18, 1871, the price was 8¾@10c.; 1881, 6½@6¾c.; 1891, 6¾@7½c.; 1901, 5½@6c.; 1911, 6½@7c.; 1913, 7@7¼c.; 1917, July, 13c.

(Dry, in casks.)

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.10½	$0.09¼	$0.08¾	$0.08
February	.09½	.09¼	.08¼	.08
March	.09½	.09¼	.08¼	.08
April	.09½	.09¼	.08¾	.08
May	.09½	.09½	.09	.08
June	.09½	.09½	.09¼	.09
July	.09½	.08	.09¼	.09
August	.08¼	.08	.09¼	.09
September	.08¼	.08	.09112	.09½
October	.08¼	.08	.0965	.0950
November	.08¼	.08	.1015	.0965
December	.08¼	.08	.1040	.1015
Year	.10½	.08	.1040	.08

Litharge, American

On October 18, 1871, the price was 9@9½c.; 1881, 6½@6¾c.; 1891, 6¾@7½c.; 1901, 4¾@5½c.; 1911, 5½@6c.; 1913, 6¾@7c.; 1917, July, 12½c.

(Carload lots.)

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.1134	$0.1053	$0.0992	$0.0992
February	.1053	.1053	.0992	.0992
March	.1053	.1053	.0992	.0992
April	.1053	.1053	.0992	.0992
May	.1053	.1053	.1012	.0992
June	.1053	.1053	.1012	.1012
July	.1053	.1053	.1012	.1012
August	.0992	.0992	.1012	.1012
September	.0992	.0992	.1032	.1032
October	.0992	.0992	.1032	.1032
November	.0992	.0992	.1073	.1032
December	.0992	.0992	.1093	.1073
Year	.1134	.0992	.1093	.0992

Orange Mineral, American

On October 18, 1871, the price was 11½@12c.; 1881, 8@12½c.; 1891, 8½@8¾c.; 1901, 8@8¼c.; 1911, 8½@10c.; 1913, 8½@10c.; 1917, July, 15c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.13¼	$0.11¾	$0.13	$0.11
February	.14	.12¼	.13	.11
March	.14	.12¼	.13	.11
April	.14	.12¼	.13½	.11
May	.13½	.11¾	.14	.11
June	.13½	.11¾	.14	.11
July	.13½	.11¾	.14	.12
August	.13	.11	.14	.12
September	.13	.11	.14	.12½
October	.13	.11	.14	.12½
November	.13	.11	.14¼	.1315
December	.13	.11	14.50	.1340
Year	.14	.11	14.50	.11

Lithopone

On May 13, 1901, the price was 5@5½c.; October 18, 1901, 5@5½c.; 1911, 3¾@4c.; 1913, 3¾@4½c.; 1920, July, 8¼c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.07¾	$0.07	$0.06¼	$0.06
February	.07¼	.07	.06¼	.06
March	.07¼	.07	.06¼	.06
April	.07¼	.07	.06¼	.06
May	.07¼	.07	.06¼	.06
June	.07¼	.07	.06¼	.06
July	.07¼	.07	.06¼	.06
August	.06¼	.06	.06¼	.06
September	.06¼	.06	.06¼	.06
October	.06¼	.06	.06¼	.06
November	.06¼	.06	.06½	.06
December	.06¼	.06	.06½	.06
Year	.07¾	.06	.06½	.06

Zinc Oxide, French Process, Red Seal

On October 18, 1871, the price was 7¾c.; 1881, 4½@5c.; 1891, 8c.; 1901, 8¼@8¾c.; 1911, 8¼@8½c.; 1913, 7@7¼c.; 1917, April, 17½c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.10¼	$0.10¾	$0.09½	$0.08¾
February	.10½	.10	.09½	.08¾
March	.10½	.10	.09½	.08¾
April	.10½	.10	.09½	.08¾
May	.10½	.10	.09½	.08¾
June	.10½	.10	.09½	.08¾
July	.09¼	.08¾	.09½	.08¾
August	.09¼	.08¾	.09½	.08¾
September	.09¼	.08¾	.09½	.08¾
October	.09¼	.08¾	.09½	.08¾
November	.09¼	.08¾	.09½	.08¾
December	.09¼	.08¾	.09¾	.08¾
Year	.10½	.08¾	.09¾	.08¾

Zinc Oxide, Green Seal

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.12¼	$0.11¾	$0.10¼	$0.09¾
February	.11½	.11	.10¼	.09¾
March	.11½	.11	.10¼	.09¾
April	.11½	.11	.10¼	.09¾
May	.11½	.11	.10¼	.09¾
June	.11½	.11	.10¼	.09¾
July	.10¼	.09¾	.10¼	.09¾
August	.10¼	.09¾	.10¼	.09¾
September	.10¼	.09¾	.10¼	.09¾
October	.10¼	.09¾	.10¼	.09¾
November	.10¼	.09¾	.10¼	.09¾
December	.10¼	.09¾	.10¾	.09¾
Year	.12¼	.09¾	.10¾	.09¾

Zinc Oxide, White Seal

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.13¼	$0.13	$0.11¼	$0.11
February	.12½	.12¼	.11¼	.11
March	.12½	.12¼	.11¼	.11
April	.12½	.12¼	.11¼	.11
May	.12½	.12¼	.11¼	.11
June	.12½	.12¼	.11¼	.11
July	.11¼	.11	.11¼	.11
August	.11¼	.11	.11¼	.11
September	.11¼	.11	.11¼	.11
October	.11¼	.11	.11¼	.11
November	.11¼	.11	.11¼	.11
December	.11¼	.11	.11¾	.11
Year	.13¼	.11	.11¾	.11

Zinc Oxide, American Process, 5 Per Cent. Lead Sulphate

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.085	$0.085	$0.0775	$0.0725
February	.085	.085	.0775	.0725
March	.085	.08	.0775	.0725
April	.085	.08	.0775	.0725
May	.085	.08	.0775	.0725
June	.085	.08	.0775	.0725
July	.0775	.0725	.0775	.0725
August	.0775	.0725	.0675	.0625
September	.0775	.0725	.0675	.0625
October	.0775	.0725	.0675	.0625
November	.0775	.0725	.0675	.0625
December	.0775	.0725	.0725	.0625
Year	.085	.0725	.0775	.0625

Zinc Oxide, American Process, 35 Per Cent. Lead Sulphate

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.08¼	$0.08¼	$0.075	$0.07
February	.08¼	.07⅝	.075	.07
March	.08¼	.07⅝	.075	.07
April	.08¼	.07⅝	.075	.07
May	.08¼	.07⅝	.075	.07
June	.08¼	.07⅝	.075	.07
July	.075	.07	.075	.07
August	.075	.07	.065	.06
September	.075	.07	.065	.06
October	.075	.07	.065	.06
November	.075	.07	.065	.06
December	.075	.07	.070	.06
Year	.08¼	.07	.075	.06

Dry Colors

Carbon Gas Black

On August 22, 1892, the price was 4@4½c.; October 18, 1901, 8@20c.; 1911, 6¾@8c.; 1913, 4@8c.; 1918, May, 40c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.20	$0.10	$0.20	$0.10½
February	.20	.12	.20	.10½
March	.20	.10½	.20	.10½
April	.20	.10½	.24	.12
May	.20	.10½	.24	.16
June	.20	.10½	.24	.16
July	.20	.10¼	.24	.16
August	.20	.10½	.24	.16
September	.20	.10½	.24	.16
October	.20	.10½	.24	.16
November	.20	.10½	.24	.16
December	.20	.10½	.24	.16
Year	.20	.10	.24	.10½

Lampblack

On October 18, 1871, the price was 6½@10c.; 1881, 5@8c.; 1891, 5@10c.; 1901, 4½@6c.; 1911, 3@15c.; 1913, 3@7c.; 1920, December, 48c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.48	$0.16	$0.45	$0.17
February	.45	.16	.45	.17
March	.45	.15	.45	.17
April	.45	.17	.45	.17
May	.45	.17	.45	.14
June	.45	.17	.40	.12
July	.45	.17	.40	.12
August	.45	.17	.40	.12
September	.45	.17	.40	.12
October	.45	.17	.40	.12
November	.45	.17	.40	.12
December	.45	.17	.40	.12
Year	.48	.15	.45	.12

Ivory Black

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.45	$0.16	$0.45	$0.15
February	.45	.16	.45	.15
March	.45	.11½	.45	.15
April	.45	.11½	.45	.15
May	.45	.10½	.45	.15
June	.45	.10½	.45	.15
July	.45	.15	.45	.15
August	.45	.15	.45	.15
September	.45	.15	.45	.15
October	.45	.15	.45	.15
November	.45	.15	.45	.15
December	.45	.15	.45	.15
Year	.45	.10½	.45	.15

Iron Oxide, Black

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.18	$0.05	$0.16	$0.04½
February	.18	.05	.16	.04½
March	.16	.04½	.16	.04½
April	.14	.04½	.16	.04½
May	.20	.04½	.16	.04½
June	.20	.04½	.16	.04½
July	.20	.04½	.16	.04½
August	.20	.04½	.16	.04½
September	.16	.04½	.16	.04½
October	.16	.04½	.16	.04½
November	.16	.04½	.16	.04½
December	.16	.04½	.16	.04½
Year	.20	.04½	.16	.04½

Iron Blues

Bronze, Milori, Chinese and Prussian

On October 18, 1871, the price was (Prussian blue) 35@70c.; 1881, 30@60c.; 1891, 25@40c.; 1901, 28@34c.; 1911, 28@30c.; 1913, 30@32c.; 1917, July, $1.50.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.82	$0.60	$0.50	$0.50
February	.65	.60	.50	.50
March	.60	.60	.50	.50
April	.60	.60	.50	.50
May	.60	.55	.60	.50
June	.60	.55	.60	.50
July	.60	.50	.60	.50
August	.50	.50	.60	.55
September	.50	.50	.60	.55
October	.50	.50	.60	.55
November	.50	.50	.60	.55
December	.50	.50	.60	.55
Year	.82	.50	.60	.50

Browns

Sienna, Italian, Burnt

On October 18, 1871, the price was 12@14c.; 1881, 5½c.; 1891, 4@5c.; 1901, 3½@7½c.; 1911, 3@4c.; 1913, 4@7c.; 1920, January, 16c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.15	$0.06	$0.14½	$0.06
February	.15	.06	.14½	.06
March	.15	.06	.14½	.06
April	.15	.06	.14½	.06
May	.15	.06	.14½	.06
June	.14½	.06	.14½	.06
July	.14½	.06	.14½	.06
August	.14½	.06	.14½	.06
September	.14½	.06	.14½	.06
October	.14½	.06	.14½	.06
November	.14½	.06	.14½	.06
December	.14½	.06	.14½	.06
Year	.15	.06	.14½	.06

Sienna, American, Burnt and Powdered

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.07½	$0.04½	$0.03¾	$0.03¾
February	.05½	.04	.03¾	.03¾
March	.05½	.04	.03¾	.03¾
April	.05½	.04	.03¾	.03¾
May	.05½	.04	.03¾	.03¾
June	.05½	.04	.03¾	.03¾
July	.05½	.04	.03¾	.03¾
August	.05½	.04	.03¾	.03¾
September	.05½	.04	.03¾	.03¾
October	.05½	.03¾	.03¾	.03¾
November	.03¾	.03¾	.03¾	.03¾
December	.03¾	.03¾	.03¾	.03¾
Year	.07½	.03¾	.03¾	.03¾

Umber, Turkey, Burnt and Powdered

On May 29, 1872, the price was 4½@5c.; August 31, 1881, 3¼@4c.; October 18, 1891, 3½@4c.; 1901, 2½@3½c.; 1911, 2¾@3½c.; 1913, 3@3½c.; 1917, October, 7½c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.07	$0.05	$0.04½	$0.04½
February	.07	.05	.04½	.04½
March	.06½	.05½	.04½	.04½
April	.05½	.05¼	.04¼	.04¼
May	.05½	.05¼	.04	.04
June	.06	.05½	.04	.04
July	.06	.05½	.04	.04
August	.05½	.05½	.04	.04
September	.05	.05	.04	.04
October	.05	.04½	.04	.04
November	.04¼	.04¼	.04	.04
December	.04¼	.04¼	.04	.04
Year	.07	.04¼	.04½	.04

Umber, American, Burnt and Powdered

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.07	$0.04½	$0.04⅝	$0.03¾
February	.05	.04¼	.04⅝	.03¾
March	.06½	.04¼	.04⅝	.03¾
April	.06½	.04½	.04⅝	.03¾
May	.07	.04	.04⅝	.03¾
June	.07	.04	.04⅝	.03¾
July	.07	.04	.04⅝	.03¾
August	.07	.04	.04⅝	.03¾
September	.05½	.04	.04⅝	.03¾
October	.05½	.03¾	.04⅝	.03¾
November	.04⅝	.03¾	.04⅝	.03¾
December	.03¾	.03¾	.04⅝	.03¾
Year	.07	.03¾	.04⅝	.03¾

Vandyke Brown

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.05	$0.03½	$0.04⅞	$0.04⅞
February	.04½	.03½	.04⅞	.04⅞
March	.04½	.03½	.04⅞	.04⅞
April	.04½	.03½	.04⅞	.04⅞
May	.07	.06	.04⅞	.04⅞
June	.07	.06	.04⅞	.04⅞
July	.07	.06	.04⅞	.04⅞
August	.07	.06	.04⅞	.04⅞
September	.06	.04⅞	.04⅞	.04⅞
October	.04⅞	.04⅞	.04⅞	.04⅞
November	.04⅞	.04⅞	.04⅞	.04⅞
December	.04⅞	.04⅞	.04⅞	.04⅞
Year	.07	.03½	.04⅞	.04⅞

Greens

Chrome Green, C. P.

On October 18, 1871, the price was 13@21c.; 1881, 5@14c.; 1891, 8@26c.; 1901, 16@20c.; 1911, 17@25c.; 1913, 7@25c.; 1918, August, 70c.

	1921. H	1921. L.	1922. H.	1922. L.
January	$0.68	$0.38	$0.45	$0.30
February	.60	.38	.45	.30
March	.58	.37	.45	.30
April	.58	.36	.45	.30
May	.58	.36	.45	.30
June	.58	.36	.45	.30
July	.47	.32	.45	.30
August	.47	.32	.45	.30
September	.47	.32	.45	.30
October	.45	.30	.45	.30
November	.45	.30	.45	.30
December	.45	.30	.45	.30
Year	.68	.30	.45	.30

Chrome Green, Commercial

On October 24, 1877, the price was 10@20c.; October 18, 1881, 5@8c.; 1891, 8c.; 1901, 5@6½c.; 1911, 3½@5c.; 1913, 3½@5c.; 1919, February, 15c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.14	$0.13½	$0.12	$0.12
February	.13½	.13½	.12	.12
March	.13½	.13½	.12	.12
April	.13½	.13½	.12	.12
May	.13½	.13½	.12	.12
June	.13½	.13½	.12	.12
July	.13½	.12	.12	.12
August	.12	.12	.12	.12
September	.12	.12	.12	.12
October	.12	.12	.12	.12
November	.12	.12	.12	.12
December	.14	.12	.12	.12
Year	.14	.12	.12	.12

Paris Green

On October 18, 1871, the price was 25@35c.; 1881, 17@18c.; 1891, 14@22c.; 1901, 12½@14¼c.; 1911, 13c.; 1913, 12@13c.; 1917, July, 51c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.35	$0.35		Nominal
February	.35	.35	$0.26	$0.24
March	.35	.30	.24	.21
April	.30	.29	.21	.20
May	.29	.29	.21	.20
June	.29	.25	.22	.21
July	.25	.22	.22	.21
August	.23	.22	.22	.21
September	.23	.22	.22	.21
October	.23	.22	.22	.21
November	.23	.22	.26	.21
December	.23	.22	.26	.25
Year	.35	.22	.26	.20

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Paint and Varnish Materials: Record of Prices

Metals

Pig Lead

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.0475	$0.0475	$0.047	$0.047
February	.0475	.046	.047	.047
March	.041	.04	.047	.047
April	.044	.041	.0525	.047
May	.05	.045	.0565	.0525
June	.05	.044	.0575	.0565
July	.044	.044	.0575	.0565
August	.044	.044	.0595	.0575
September	.047	.044	.0635	.0595
October	.047	.047	.0650	.0635
November	.047	.047	.0710	.0650
December	.047	.047	.0725	.0710
Year	.05	.04	.0725	.047

Zinc

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.06	$0.056	$0.052	$0.0495
February	.053	.053	.0485	.0485
March	.0515	.05	.05	.049
April	.0515	.05	.0535	.05
May	.051	.05	.056	.0535
June	.051	.0475	.0565	.056
July	.0475	.045	.0635	.0565
August	.045	.044	.0665	.0665
September	.044	.042	.0725	.0675
October	.0495	.049	.0735	.0725
November	.0505	.0495	.0735	.0725
December	.052	.0505	.0735	.0730
Year	.06	.042	.0735	.0483

Pigments

Barytes

On October 18, 1871, the price was 1⅞@2¼c.; 1881, $21@25 per ton; 1891, $18@20; 1901, $17@20; 1911, $18.50@20.50; 1913, $19@20; 1920, August, $40.

(Western f.o.b. works.)

	1921. H.	1921. L.	1922. H.	1922. L.
January	$24.50	$23.50	$23.00	$23.00
February	24.50	24.50	23.00	23.00
March	24.50	24.50	23.00	23.00
April	24.50	24.50	23.00	23.00
May	24.50	24.50	23.00	23.00
June	24.50	24.50	23.00	23.00
July	24.50	24.50	23.00	23.00
August	24.50	23.00	23.00	23.00
September	23.00	23.00	23.00	23.00
October	23.00	23.00	23.00	23.00
November	23.00	23.00	26.00	23.00
December	23.00	23.00	26.00	26.00
Year	24.50	23.00	26.00	23.00

Blanc Fixe, Dry

On July 21, 1880, the price was 3½c.; October 18, 1881, 3½c.; 1891, 2¾@3c.; 1901, 2½@2¾c.; 1911, 2¾@4c.; 1913, 2¾@4c.; 1920, August, 6½c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.05½	$0.05	$0.04½	$0.04
February	.05½	.05	.04¼	.04
March	.05	.04	.04¼	.04
April	.05	.04	.04¼	.04
May	.05	.04	.04½	.04¼
June	.05	.04	.04½	.04¼
July	.05	.04	.04½	.04¼
August	.04½	.04	.04½	.04¼
September	.04	.03¾	.04½	.04¼
October	.03¾	.03½	.04½	.04¼
November	.03¾	.03½	.04½	.04¼
December	.04½	.04	.04½	.04¼
Year	.05½	.03½	.04½	.04

White Lead, Basic Carbonate

On October 18, 1871, the price was 10@10¼c.; 1881, 6¾@7c.; 1891, 6¾@7½c.; 1901, 4¾@6c.; 1911, 5½@6c.; 1913, 5¾c.; 1917, July, 11½c.

(Dry, in casks.)

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.09	$0.08	$0.07½	$0.06½
February	.08	.08	.07½	.06¾
March	.08	.08	.07½	.06¾
April	.08	.07½	.07¾	.06¾
May	.08	.07½	.08	.06¾
June	.08	.07½	.08	.07¼
July	.08	.06½	.08	.07¼
August	.07½	.06½	.08	.07¼
September	.07½	.06½	.08¼	.07¾
October	.07½	.06½	.08¼	.07¾
November	.07½	.06½	.08¾	.08
December	.07½	.06½	.08¾	.08
Year	.09	.06½	.08¾	.06½

White Lead, Basic Carbonate, in Oil

On October 18, 1871, the price was 11½c.; 1881, 7¼@7½c.; 1891, 6¾@7¼c.; 1901, 5¾@6½c.; 1911, 7¼@7½c.; 1913, 7¼c.; 1917, July, 11½c.

(Carload lots.)

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.1134	$0.1053	$0.0992	$0.09125
February	.1053	.1053	.0992	.09125
March	.1053	.0987	.0992	.09125
April	.1053	.0987	.0992	.09125
May	.1053	.0987	.1012	.09125
June	.1053	.0987	.1012	.09375
July	.1053	.09125	.1012	.09375
August	.0992	.09125	.1012	.09375
September	.0992	.09125	.1032	.09875
October	.0992	.09125	.1032	.09875
November	.0992	.09125	.1073	.108¾
December	.0992	.09125	.1093	.108¾
Year	.1134	.09125	.1093	.09125

White Lead, Basic Sulphate

On December 7, 1909, the price was 5¾@6c.; October 19, 1911, 5¾@5½c.; 1913, 5½c.; 1917, August, 11c.

(Dry, in casks.)

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.08¼	$0.07¼	$0.07	$0.06¾
February	.07½	.07¼	.07	.06¾
March	.07½	.07¼	.07	.06¾
April	.07½	.07¼	.07¼	.06¾
May	.07½	.07½	.07½	.06¾
June	.07½	.07½	.07½	.07¼
July	.07½	.06¾	.07½	.07¼
August	.07	.06¾	.07½	.07¼
September	.07	.06¾	.07¾	.07½
October	.07	.06¾	.07¾	.07½
November	.07	.06¾	.08¼	.07¾
December	.07	.06¾	.08¼	.07¾
Year	.08¼	.06¾	.08¼	.06¾

Red Lead

On October 18, 1871, the price was 8¾@10c.; 1881, 6¼@6¾c.; 1891, 6¾@7½c.; 1901, 5½@6c.; 1911, 6½@7c.; 1913, 7@7½c.; 1917, July, 13c.

(Dry, in casks.)

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.10½	$0.09¼	$0.08¼	$0.08
February	.09½	.09¼	.08¼	.08
March	.09½	.09¼	.08¼	.08
April	.09½	.09¼	.08¾	.08
May	.09½	.09½	.09	.08
June	.09½	.09½	.09¼	.09
July	.09½	.08	.09¼	.09
August	.08¼	.08	.09¼	.09
September	.08¼	.08	.09112	.09½
October	.08¼	.08	.0965	.0950
November	.08¼	.08	.1015	.0965
December	.08¼	.08	.1040	.1015
Year	.10½	.08	.1040	.08

Litharge, American

On October 18, 1871, the price was 9@9½c.; 1881, 6½@6¾c.; 1891, 6¾@7½c.; 1901, 4¾@5½c.; 1911, 5½@6c.; 1913, 6¾@7c.; 1917, July, 12½c.

(Carload lots.)

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.1134	$0.1053	$0.0992	$0.0992
February	.1053	.1053	.0992	.0992
March	.1053	.1053	.0992	.0992
April	.1053	.1053	.0992	.0992
May	.1053	.1053	.1012	.0992
June	.1053	.1053	.1012	.1012
July	.1053	.1053	.1012	.1012
August	.0992	.0992	.1012	.1012
September	.0992	.0992	.1032	.1032
October	.0992	.0992	.1032	.1032
November	.0992	.0992	.1073	.1032
December	.0992	.0992	.1093	.1073
Year	.1134	.0992	.1093	.0992

Orange Mineral, American

On October 18, 1871, the price was 11¼@12c.; 1881, 8@12½c.; 1891, 8½@8¾c.; 1901, 8@8¼c.; 1911, 8½@10c.; 1913, 8½@10c.; 1917, July, 15c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.13¼	$0.11¾	$0.13	$0.11
February	.14	.12¼	.13	.11
March	.14	.12¼	.13	.11
April	.14	.12¾	.13½	.11
May	.13½	.11¾	.14	.11
June	.13½	.11¾	.14	.11
July	.13½	.11¾	.14	.12
August	.13	.11	.14	.12
September	.13	.11	.14	.12½
October	.13	.11	.14	.12½
November	.13	.11	.14¼	.1315
December	.13	.11	14.50	.1340
Year	.14	.11	14.50	.11

Lithopone

On May 13, 1901, the price was 5@5½c.; October 18, 1901, 5@5¼c.; 1911, 3¾@4c.; 1913, 3¾@4½c.; 1920, July, 8¼c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.07¾	$0.07	$0.06¼	$0.06
February	.07¼	.07	.06¼	.06
March	.07¼	.07	.06¼	.06
April	.07¼	.07	.06¼	.06
May	.07¼	.07	.06¼	.06
June	.07¼	.07	.06¼	.06
July	.07¼	.07	.06¼	.06
August	.06¼	.06	.06¼	.06
September	.06¼	.06	.06¾	.06
October	.06¼	.06	.06¼	.06
November	.06¼	.06	.06½	.06
December	.06¼	.06	.06½	.06
Year	.07¾	.06	.06½	.06

Zinc Oxide, French Process, Red Seal

On October 18, 1871, the price was 7¾c.; 1881, 4½@5c.; 1891, 8c.; 1901, 8¼@8¾c.; 1911, 8¼@8½c.; 1913, 7@7¼c.; 1917, April, 17½c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.10¼	$0.10¼	$0.09¼	$0.08¾
February	.10½	.10	.09½	.08¾
March	.10½	.10	.09½	.08¾
April	.10½	.10	.09½	.08¾
May	.10½	.10	.09½	.08¾
June	.10¼	.10	.09½	.08¾
July	.09¾	.08¾	.09½	.08¾
August	.09¼	.08¾	.09½	.08¾
September	.09¼	.08¾	.09½	.08¾
October	.09¼	.08¾	.09½	.08¾
November	.09¼	.08¾	.09½	.08¾
December	.09¼	.08¾	.09¾	.08¾
Year	.10½	.08¾	.09¾	.08¾

Zinc Oxide, Green Seal

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.12¼	$0.11¾	$0.10¼	$0.09¾
February	.11½	.11	.10¼	.09¾
March	.11½	.11	.10¼	.09¾
April	.11½	.11	.10¼	.09¾
May	.11½	.11	.10¼	.09¾
June	.11½	.11	.10¼	.09¾
July	.10¼	.09¾	.10¼	.09¾
August	.10¼	.09¾	.10¼	.09¾
September	.10¼	.09¾	.10¼	.09¾
October	.10¼	.09¾	.10¼	.09¾
November	.10¼	.09¾	.10¼	.09¾
December	.10¼	.09¾	.10¾	.09¾
Year	.12¾	.09¾	.10¾	.09¾

Zinc Oxide, White Seal

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.13¼	$0.13	$0.11¼	$0.11
February	.12½	.12¼	.11¼	.11
March	.12½	.12¼	.11¼	.11
April	.12½	.12¼	.11¼	.11
May	.12½	.12¼	.11¼	.11
June	.12½	.12¼	.11¼	.11
July	.11¼	.11	.11¼	.11
August	.11¼	.11	.11¼	.11
September	.11¼	.11	.11¼	.11
October	.11¼	.11	.11¼	.11
November	.11¼	.11	.11¼	.11
December	.11¼	.11	.11¼	.11
Year	.13¼	.11	.11¾	.11

Zinc Oxide, American Process, 5 Per Cent. Lead Sulphate

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.085	$0.085	$0.0775	$0.0725
February	.085	.085	.0775	.0725
March	.085	.08	.0775	.0725
April	.085	.08	.0775	.0725
May	.085	.08	.0775	.0725
June	.085	.08	.0775	.0725
July	.0775	.0725	.0775	.0725
August	.0775	.0725	.0675	.0625
September	.0775	.0725	.0675	.0625
October	.0775	.0725	.0675	.0625
November	.0775	.0725	.0675	.0625
December	.0775	.0725	.0725	.0625
Year	.085	.0725	.0775	.0625

Zinc Oxide, American Process, 35 Per Cent. Lead Sulphate

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.08⅛	$0.08⅛	$0.075	$0.07
February	.08⅛	.07⅞	.075	.07
March	.08⅛	.07⅞	.075	.07
April	.08⅛	.07⅞	.075	.07
May	.08⅛	.07⅞	.075	.07
June	.08⅛	.07⅞	.075	.07
July	.075	.07	.075	.07
August	.075	.07	.065	.06
September	.075	.07	.065	.06
October	.075	.07	.065	.06
November	.075	.07	.065	.06
December	.075	.07	.070	.06
Year	.08⅛	.07	.075	.06

Dry Colors

Carbon Gas Black

On August 22, 1892, the price was 4@4½c.; October 18, 1901, 8@20c.; 1911, 6¾@8c.; 1913, 4@8c.; 1918, May, 40c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.20	$0.10	$0.20	$0.10½
February	.20	.12	.20	.10½
March	.20	.10½	.20	.10½
April	.20	.10½	.24	.12
May	.20	.10½	.24	.16
June	.20	.10½	.24	.16
July	.20	.10½	.24	.16
August	.20	.10½	.24	.16
September	.20	.10½	.24	.16
October	.20	.10½	.24	.16
November	.20	.10½	.24	.16
December	.20	.10½	.24	.16
Year	.20	.10	.24	.10½

Lampblack

On October 18, 1871, the price was 6½@10c.; 1881, 5@8c.; 1891, 5@10c.; 1901, 4½@6c.; 1911, 3@15c.; 1913, 3@7c.; 1920, December, 48c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.48	$0.16	$0.45	$0.17
February	.45	.16	.45	.17
March	.45	.15	.45	.17
April	.45	.17	.45	.17
May	.45	.17	.45	.14
June	.45	.17	.40	.12
July	.45	.17	.40	.12
August	.45	.17	.40	.12
September	.45	.17	.40	.12
October	.45	.17	.40	.12
November	.45	.17	.40	.12
December	.45	.17	.40	.12
Year	.48	.15	.45	.12

Ivory Black

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.45	$0.16	$0.45	$0.15
February	.45	.16	.45	.15
March	.45	.11½	.45	.15
April	.45	.11½	.45	.15
May	.45	.10½	.45	.15
June	.45	.10½	.45	.15
July	.45	.15	.45	.15
August	.45	.15	.45	.15
September	.45	.15	.45	.15
October	.45	.15	.45	.15
November	.45	.15	.45	.15
December	.45	.15	.45	.15
Year	.45	.10½	.45	.15

Iron Oxide, Black

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.18	$0.05	$0.16	$0.04½
February	.18	.05	.16	.04½
March	.16	.04½	.16	.04½
April	.14	.04½	.16	.04½
May	.20	.04½	.16	.04½
June	.20	.04½	.16	.04½
July	.20	.04½	.16	.04½
August	.20	.04½	.16	.04½
September	.16	.04½	.16	.04½
October	.16	.04½	.16	.04½
November	.16	.04½	.16	.04½
December	.16	.04½	.16	.04½
Year	.20	.04½	.16	.04½

Iron Blues

Bronze, Milori, Chinese and Prussian

On October 18, 1871, the price was (Prussian blue) 35@70c.; 1881, 30@60c.; 1891, 25@40c.; 1901, 28@34c.; 1911, 28@30c.; 1913, 30@32c.; 1917, July, $1.50.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.82	$0.60	$0.50	$0.50
February	.65	.60	.50	.50
March	.60	.60	.50	.50
April	.60	.60	.50	.50
May	.60	.55	.60	.50
June	.60	.55	.60	.50
July	.60	.50	.60	.50
August	.50	.50	.60	.55
September	.50	.50	.60	.55
October	.50	.50	.60	.55
November	.50	.50	.60	.55
December	.50	.50	.60	.55
Year	.82	.50	.60	.50

Browns

Sienna, Italian, Burnt

On October 18, 1871, the price was 12@14c.; 1881, 5½c.; 1891, 4@5c.; 1901, 3½@7½c.; 1911, 3@4c.; 1913, 4@7c.; 1920, January, 16c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.15	$0.06	$0.14½	$0.06
February	.15	.06	.14½	.06
March	.15	.06	.14½	.06
April	.15	.06	.14½	.06
May	.15	.06	.14½	.06
June	.14½	.06	.14½	.06
July	.14½	.06	.14½	.06
August	.14½	.06	.14½	.06
September	.14½	.06	.14½	.06
October	.14½	.06	.14½	.06
November	.14½	.06	.14½	.06
December	.14½	.06	.14½	.06
Year	.15	.06	.14½	.06

Sienna, American, Burnt and Powdered

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.07½	$0.04½	$0.03¾	$0.03¾
February	.05½	.04	.03¾	.03¾
March	.05½	.04	.03¾	.03¾
April	.05½	.04	.03¾	.03¾
May	.05½	.04	.03¾	.03¾
June	.05½	.04	.03¾	.03¾
July	.05½	.04	.03¾	.03¾
August	.05½	.04	.03¾	.03¾
September	.05½	.04	.03¾	.03¾
October	.05½	.03¾	.03¾	.03¾
November	.03¾	.03¾	.03¾	.03¾
December	.03¾	.03¾	.03¾	.03¾
Year	.07½	.03¾	.03¾	.03¾

Umber, Turkey, Burnt and Powdered

On May 20, 1872, the price was 4½@5c.; August 31, 1881, 3¼@4c.; October 18, 1891, 3½@4c.; 1901, 2½@3½c.; 1911, 2¾@3½c.; 1913, 3@3½c.; 1917, October, 7½c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.07	$0.05	$0.04½	$0.04½
February	.07	.05	.04½	.04½
March	.06½	.05½	.04½	.04½
April	.05½	.05¼	.04¼	.04¼
May	.05½	.05¼	.04	.04
June	.06	.05½	.04	.04
July	.06	.05½	.04	.04
August	.05½	.05½	.04	.04
September	.05	.05	.04	.04
October	.05	.04½	.04	.04
November	.04¼	.04¼	.04	.04
December	.04¼	.04¼	.04	.04
Year	.07	.04¼	.04½	.04

Umber, American, Burnt and Powdered

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.07	$0.04½	$0.04¾	$0.03¾
February	.05	.04¼	.04¾	.03¾
March	.06½	.04¼	.04¾	.03¾
April	.06½	.04½	.04¾	.03¾
May	.07	.04	.04¾	.03¾
June	.07	.04	.04¾	.03¾
July	.07	.04	.04¾	.03¾
August	.07	.04	.04¾	.03¾
September	.05½	.04	.04¾	.03¾
October	.05½	.03¾	.04¾	.03¾
November	.04¾	.03¾	.04¾	.03¾
December	.03¾	.03¾	.04¾	.03¾
Year	.07	.03¾	.04¾	.03¾

Vandyke Brown

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.05	$0.03½	$0.04¾	$0.04¾
February	.04½	.03½	.04¾	.04¾
March	.04½	.03½	.04¾	.04¾
April	.04½	.03½	.04¾	.04¾
May	.07	.06	.04¾	.04¾
June	.07	.06	.04¾	.04¾
July	.07	.06	.04¾	.04¾
August	.07	.06	.04¾	.04¾
September	.06	.04¾	.04¾	.04¾
October	.06	.04¾	.04¾	.04¾
November	.04¾	.04¾	.04¾	.04¾
December	.04¾	.04¾	.04¾	.04¾
Year	.07	.03½	.04¾	.04¾

Greens

Chrome Green, C. P.

On October 18, 1871, the price was 13@21c.; 1881, 5@14c.; 1891, 8@26c.; 1901, 16@20c.; 1911, 17@25c.; 1913, 7@25c.; 1918, August, 70c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.68	$0.38	$0.45	$0.30
February	.60	.38	.45	.30
March	.58	.37	.45	.30
April	.58	.36	.45	.30
May	.58	.36	.45	.30
June	.58	.36	.45	.30
July	.47	.32	.45	.30
August	.47	.32	.45	.30
September	.47	.32	.45	.30
October	.45	.30	.45	.30
November	.45	.30	.45	.30
December	.45	.30	.45	.30
Year	.68	.30	.45	.30

Chrome Green, Commercial

On October 24, 1877, the price was 10@20c.; October 18, 1881, 5@8c.; 1891, 8c.; 1901, 5@6½c.; 1911, 3½@5c.; 1913, 3½@5c.; 1919, February, 15c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.14	$0.13½	$0.12	$0.12
February	.13½	.13½	.12	.12
March	.13½	.13½	.12	.12
April	.13½	.13½	.12	.12
May	.13½	.13½	.12	.12
June	.13½	.13½	.12	.12
July	.13½	.12	.12	.12
August	.12	.12	.12	.12
September	.12	.12	.12	.12
October	.12	.12	.12	.12
November	.12	.12	.12	.12
December	.14	.12	.12	.12
Year	.14	.12	.12	.12

Paris Green

On October 18, 1871, the price was 25@35c.; 1881, 17@18c.; 1891, 14@22c.; 1901, 12½@14¼c.; 1911, 13c.; 1913, 12@13c.; 1917, July, 51c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.35	$0.35	Nominal	
February	.35	.35	$0.26	$0.24
March	.35	.30	.24	.21
April	.30	.29	.21	.20
May	.29	.29	.21	.20
June	.29	.25	.21	.21
July	.25	.22	.21	.21
August	.23	.22	.22	.21
September	.23	.22	.22	.21
October	.23	.22	.22	.21
November	.23	.22	.24	.21
December	.23	.22	.26	.25
Year	.35	.22	.26	.20

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C. A. WOOLSEY PAINT & COLOR CO.

Established 1853. JERSEY CITY, NEW JERSEY, U. S. A.

Reds

Carmine No. 40

On August 15, 1877, the price was $5.50@7; October 18, 1881, $5@5.25; 1891, $3.10@3.20; 1901, $2.65@2.75; 1911, $2.30@2.50; 1913,$2.75@3; 1919, January, $6.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$5.50	$5.00	$4.75	$4.50
February	5.00	5.00	4.75	4.50
March	5.00	5.00	4.75	4.50
April	5.00	5.00	4.75	4.50
May	5.00	5.00	4.75	4.50
June	5.00	5.00	4.75	4.50
July	5.00	4.75	4.75	4.50
August	4.75	4.50	4.75	4.50
September	4.75	4.50	4.75	4.50
October	4.75	4.50	4.75	4.50
November	4.75	4.50	4.75	4.50
December	4.75	4.50	4.75	4.50
Year	5.50	4.50	4.75	4.50

Indian Red, American

On September 8, 1880, the price was 1½@1¾c.; October 18, 1881, 1½@1¾c.; 1891, 3½@6½c.; 1901, 3@3¼c.; 1911, 1½@1¾c.; 1913, 1½@1⅝c.; 1919, January, 16c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.16½	$0.14	$0.12	$0.08
February	.16½	.14	.12	.08
March	.16½	.08	.12	.08
April	.10	.08	.12	.08
May	.10	.08	.12	.08
June	.10	.08	.12	.08
July	.10	.08	.12	.08
August	.10	.08	.12	.08
September	.14	.08	.12	.08
October	.12	.08	.12	.08
November	.12	.08	.12	.08
December	.12	.08	.12	.08
Year	.16½	.08	.12	.08

Oxide Red, Copperas

On May 13, 1907, the price was 2@7½c.; October 18, 1911, 2¾@10c.; 1913, 2¾@10c.; 1918, July, 20c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.17	$0.15	$0.14	$0.10
February	.19	.15	.14	.10
March	.15	.13	.14	.10
April	.16	.13	.14	.10
May	.16	.13	.14	.10
June	.16	.13	.14	.10
July	.16	.13	.14	.10
August	.16	.10	.14	.10
September	.14	.10	.14	.10
October	.14	.10	.14	.10
November	.14	.10	.14	.10
December	.14	.10	.14	.10
Year	.19	.10	.14	.10

Tuscan Red

On August 15, 1877, the price was 20@25c.; October 18, 1881, 11½@13c.; 1891, 7@10c.; 1901, 7@10c.; 1911, 7@10c.; 1913, 7@10c.; 1921, November, 44c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.30	$0.22	$0.44	$0.17½
February	.30	.22	.44	.17½
March	.30	.22	.44	.17½
April	.35	.17½	.44	.17½
May	.30	.17½	.35	.17½
June	.30	.17½	.35	.17½
July	.30	.17½	.35	.17½
August	.30	.17½	.35	.17½
September	.30	.17½	.35	.17½
October	.30	.17½	.35	.17½
November	.44	.17½	.35	.17½
December	.44	.17½	.35	.17½
Year	.44	.17½	.44	.17½

Venetian Red

On October 18, 1871, the price was 2½@3c.; 1881, 1¾@1¾c.; 1891, 1¼@1½c.; 1901, 1¾@3c.; 1911, 1¼@1¾c.; 1913, 1½@1¾c.; 1920, November, 10c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.09	$0.03½	$0.06½	$0.03½
February	.06½	.03½	.06½	.03½
March	.06½	.03½	.06½	.03½
April	.06½	.03½	.06½	.03½
May	.06½	.03½	.06½	.03½
June	.06½	.03½	.06	.03½
July	.06½	.03½	.06	.03½
August	.06½	.03½	.06	.03½
September	.06½	.03½	.06	.03½
October	.06½	.03½	.06	.03½
November	.06½	.03½	.06	.03½
December	.06½	.03½	.06	.03½
Year	.09	.03½	.06½	.03½

English Vermilion

On October 18, 1871, the price was $1@1.10; 1881, 54c.; 1891, 91@95c.; 1901, 80@90c.; 1911, 70c.; 1913, 70c.; 1919, January, $2.10.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.10	$1.00	$0.90	$0.85
February	1.10	1.00	.90	.85
March	1.10	1.00	.90	.85
April	1.10	.95	.95	.82
May	.95	.90	.95	.90
June	.95	.90	.95	.90
July	.95	.90	.95	.90
August	.90	.80	1.20	.90
September	.80	.75	1.30	1.20
October	.75	.70	1.30	1.25
November	.80	.75	1.30	1.25
December	.90	.80	1.35	1.30
Year	1.10	.70	1.35	.82

Yellows

Chrome Yellow, C. P.

On October 18, 1871, the price was 22@23c.; 1881, 10@30c.; 1891, 10@25c.; 1901, 10½@25c.; 1911, 12½@13c.; 1913, 11@13c.; 1918, March, 35c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.29	$0.25	$0.17	$0.17
February	.25	.22	.17	.17
March	.22	.22	.17	.16½
April	.22	.21	.17	.16½
May	.21	.21	.17	.16½
June	.21	.21	.17	.16½
July	.21	.21	.17	.16½
August	.21	.20	.17	.16½
September	.20	.18	.17	.16½
October	.18	.18	.17	.17
November	.18	.18	.17	.17
December	.18	.17	.17	.17
Year	.29	.17	.17	.16½

Yellow Ocher, Domestic, Strong

On October 18, 1871, the price was 1¼@1½c.; 1881, 1¼@1½c.; 1891, 1⅝@2¼c.; 1901, 1½@2c.; 1911, 1½@2c.; 1913, ⅝@⅞c.; 1919, August, 5½c. per pound.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.05	$0.03	$0.05	$0.03
February	.05	.03	.03	.02½
March	.05	.03	.03	.02½
April	.05	.03	.03	.02½
May	.05	.03	.03	.02½
June	.05	.03	.03	.02½
July	.05	.03	.03	.02½
August	.05	.03	.03	.02½
September	.05	.03	.03	.02½
October	.05	.03	.03	.02½
November	.05	.03	.03	.02¼
December	.05	.03	.03	.02¼
Year	.05	.03	.05	.02¼

French Ocher

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.04	$0.03¼	$0.03¼	$0.02½
February	.04	.03¼	.03¼	.02
March	.04	.03¼	.03	.02
April	.04	.03¼	.04½	.03
May	.04	.03¼	.04½	.03
June	.04	.03¼	.04½	.03
July	.04	.03¼	.04½	.03
August	.04	.03¼	.03½	.02⅝
September	.04	.03¼	.03½	.02⅝
October	.03½	.02½	.03½	.02⅝
November	.03½	.02½	.03½	.02⅝
December	.04	.02½	.03½	.02⅝
Year	.04	.02½	.04½	.02

Other Paint Materials

Casein

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.15	$0.11	$0.09½	$0.08
February	.14	.11	.10	.08½
March	.15	.12½	.10	.09
April	.15	.08½	.10	.09
May	.10	.08	.13	.09
June	.10	.07	.15	.12
July	.08	.06½	.20	.16
August	.07½	.06½	.20	.15
September	.08	.06½	.20	.16
October	.08	.06¾	.20	.16
November	.09	.08	No stocks.	
December	.09	.08	No stocks.	
Year	.15	.06½	.20	.08

China Clay, Imported

On October 18, 1871, the price was 2¼@2½c.; 1881, $14.50@21 per ton; 1891, $13@18; 1901, $12@17; 1911, $11@18; 1913, $11@18; 1918, August, $50.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$25.00	$16.00	$21.00	$16.00
February	25.00	16.00	21.00	16.00
March	25.00	16.00	21.00	16.00
April	25.00	16.00	22.50	16.00
May	25.00	16.00	22.50	16.00
June	25.00	16.00	22.00	15.00
July	24.00	16.00	22.00	15.00
August	24.00	16.00	22.00	15.00
September	24.00	16.00	23.25	15.00
October	24.00	16.00	23.25	16.25
November	24.00	16.00	23.25	16.25
December	24.00	16.00	23.25	16.25
Year	25.00	16.00	23.25	15.00

China Clay, Domestic

On November 30, 1891, the price was $9@12; October 18, 1901, $8.50@10; 1911, $8@9; 1913, $8@9; 1919, March, $25.

(F.o.b. point of production.)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$12.00	$10.00	$9.00	$7.00
February	12.00	10.00	9.00	7.00
March	12.00	10.00	9.00	7.00
April	12.00	10.00	16.50	9.00
May	12.00	7.50	16.50	9.00
June	9.00	7.50	16.50	15.00
July	9.00	7.50	16.50	15.00
August	9.00	7.50	16.50	15.00
September	9.00	7.50	16.50	15.00
October	9.00	7.50	16.50	15.00
November	9.00	7.50	16.50	15.00
December	9.00	7.50	16.50	15.00
Year	12.00	7.50	16.50	7.00

Cobalt Oxide

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$4.10	$4.00	$2.25	$2.00
February	4.10	4.00	2.25	2.00
March	4.10	4.00	2.25	2.00
April	4.10	4.00	2.25	2.00
May	4.10	3.00	2.25	2.00
June	3.10	3.00	2.25	2.00
July	3.10	3.00	2.25	2.00
August	3.10	3.00	2.25	2.00
September	3.10	2.00	2.50	2.10
October	2.25	2.00	2.50	2.10
November	2.25	2.00	2.50	2.10
December	2.25	2.00	2.50	2.10
Year	4.10	2.00	2.50	2.00

Fuller's Earth, Powdered (Imported)

On February 18, 1895, the price was 75@80c. per 100 pounds; October 18, 1901, 75@80c.; 1911, 80@85c.; 1913, 80@85c.; 1918, July, $2.

	Per ton			
	1921.		1922.	
	H.	L.	H.	L.
January	$20.00	$17.00	$25.00	$22.00
February	22.00	17.00	25.00	22.00
March	24.50	22.00	25.00	22.00
April	22.00	22.00	25.00	22.00
May	22.00	22.00	25.00	22.00
June	22.00	22.00	25.00	23.00
July	22.00	22.00	25.00	23.00
August	22.00	22.00	25.00	23.00
September	22.00	22.00	25.00	23.00
October	22.00	22.00	25.00	23.00
November	22.00	22.00	25.00	23.00
December	22.00	22.00	25.00	23.00
Year	24.50	17.00	25.00	22.00

Plaster of Paris

On August 15, 1877, the price was $3; October 18, 1881, $1.75; 1891, $1.75@2; 1901, $1.75; 1911, $1.50@1.70; 1913, $1.50@1.75; 1920, November, $5.

	Per barrel			
	1921.		1922.	
	H.	L.	H.	L.
January	$5.00	$4.25	$5.00	$4.25
February	5.00	4.25	5.00	4.25
March	5.00	4.25	5.00	4.25
April	5.00	4.25	5.00	4.25
May	5.00	4.25	5.00	4.25
June	5.00	4.25	5.00	4.25
July	5.00	4.25	5.00	4.25
August	5.00	4.25	5.00	4.25
September	5.00	4.25	5.00	4.25
October	5.00	4.25	5.00	4.25
November	5.00	4.25	5.00	4.25
December	5.00	4.25	5.00	4.25
Year	5.00	4.25	5.00	4.25

Putty, Commercial

On October 18, 1871, the price in 12½-lb. tins was 3¾@4¼c.; 1881, 2½@2¾c.; 1891, 2¾@2½c.; 1901, 2¼c.; 1911, 1½@2c.; 1913, 1 to 5-lb. tins, $1.50@1.90 per 100 pounds; 1918, July, $7.40.

	Per pound		Per 100 lbs.	
	1921.		1922.	
	H.	L.	H.	L.
January	$0.06¾	$0.05	$6.25	$4.75
February	.06½	.05	6.25	4.75
March	.06½	.05	6.25	4.75
April	.06¾	.05¼	6.25	4.75
May	.06¾	.05¼	6.25	4.75
June	.06¾	.05¼	6.25	4.75
July	.06¾	.05¼	6.25	4.75
August	.06¾	.05¼	6.25	4.75
September	.06¾	.05¼	6.25	4.75
October	.06¾	.05¼	6.25	4.75
November	.06¾	.05¼	6.25	4.75
December	.06¾	.05¼	6.25	4.75
Year	.06¾	.05	6.25	4.75

Silica

On January 25, 1888, the price was $14@25; October 18, 1891, $14@25; 1901, $12@18; 1911, $12@40; 1913, $12@40; 1918, July, $40.

	Per ton			
	1921.		1922.	
	H.	L.	H.	L.
January	$40.00	$25.00	$35.00	$12.00
February	40.00	25.00	35.00	12.00
March	40.00	25.00	35.00	12.00
April	40.00	25.00	35.00	12.00
May	40.00	25.00	40.00	10.00
June	40.00	25.00	40.00	10.00
July	35.00	12.00	40.00	10.00
August	35.00	12.00	40.00	10.00
September	35.00	12.00	40.00	10.00
October	35.00	12.00	40.00	10.00
November	35.00	12.00	40.00	10.00
December	35.00	12.00	40.00	10.00
Year	40.00	12.00	40.00	10.00

Terra Alba, American, No. 1

On October 24, 1888, the price was 65@70c.; October 18, 1891, $1; 1901, 65@85c.; 1911, 75@80c.; 1913, 75@80c.; 1921, January, $2.

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$2.00	$1.50	$2.00	$1.85
February	2.00	2.00	2.00	1.85
March	2.00	1.85	2.00	1.85
April	2.00	1.85	2.00	1.85
May	2.00	1.85	2.00	1.85
June	2.00	1.85	2.00	1.85
July	2.00	1.85	2.00	1.85
August	2.00	1.85	2.00	1.85
September	2.00	1.85	2.00	1.85
October	2.00	1.85	2.00	1.85
November	2.00	1.85	2.00	1.85
December	2.00	1.85	2.00	1.85
Year	2.00	1.50	2.00	1.85

Talc, American

On November 30, 1891, the price was $1@1.25 per 100 pounds; October 18, 1901, 90c.@$1.10; 1911, $15@20 per ton; 1913, $15@20; 1918, July, $40.

	Per ton			
	1921.		1922.	
	H.	L.	H.	L.
January	$20.00	$18.00	$20.00	$18.00
February	20.00	18.00	20.00	18.00
March	20.00	18.00	20.00	15.00
April	20.00	18.00	18.00	15.00
May	20.00	18.00	18.00	15.00
June	20.00	18.00	18.00	15.00
July	20.00	18.00	18.00	15.00
August	20.00	18.00	18.00	15.00
September	20.00	18.00	18.00	15.00
October	20.00	18.00	18.00	15.00
November	20.00	18.00	18.00	15.00
December	20.00	18.00	18.00	15.00
Year	20.00	18.00	20.00	15.00

Whiting, Commercial

On October 18, 1871, the price was 1c. per pound; 1881, 50@55c. per 100 pounds; 1891, 70@75c.; 1901, 40@60c.; 1911, 45@50c.; 1913, 45@50c.; 1920, April, $1.40.

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.40	$1.40	$1.15	$1.15
February	1.40	1.30	1.15	1.15
March	1.30	1.25	1.15	1.15
April	1.25	1.20	1.15	1.10
May	1.25	1.20	1.10	1.10
June	1.25	1.20	1.10	1.10
July	1.25	1.15	1.10	1.10
August	1.15	1.15	1.10	1.10
September	1.15	1.15	1.10	1.00
October	1.15	1.15	1.00	1.00
November	1.15	1.15	1.00	1.00
December	1.15	1.15	1.00	1.00
Year	1.40	1.15	1.15	1.00

Varnish Gums

Congo, Copal Picture

On February 8, 1909, the price was 30@35c.; October 18, 1911, 30@35c.; 1913, 30@34c.; 1918, July, 45c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.40	$0.36	$0.36	$0.34
February	.38	.34	.36	.34
March	.36	.34	.45	.40
April	.36	.34	.45	.40
May	.36	.34	.45	.40
June	.36	.34	.45	.40
July	.36	.34	.45	.40
August	.36	.34	.45	.40
September	.36	.34	.45	.40
October	.36	.34	.45	.40
November	.36	.34	.45	.40
December	.36	.34	.45	.40
Year	.40	.34	.45	.34

Dammar, Batavia

On October 18, 1871, the price was 13c.; 1881, 18@21c.; 1891, 16@18c.; 1901, 12½@13½c.; 1911, 12½@12¾c.; 1913, 20@21c.; 1920, March, 60c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.28	$0.25	$0.27	$0.27
February	.22	.20	.30	.27
March	.22	.19	.30	.31
April	.19	.18	.30	.30
May	.19	.18	.34	.32
June	.19	.18½	.35	.34
July	.19	.18½	.35	.35
August	.19	.18½	.33	.35
September	.21	.19	.35	.34
October	.20	.19½	.34	.31½
November	.20	.19½	.34	.31½
December	.27	.24	.31	.29½
Year	.28	.18	.35	.27

Kauri, No. 1

On October 18, 1871, the price for ordinary to prime was 11@12c.; 1881, 10@15c.; 1891, 13¼@14½c.; 1901, 26@30c.; 1911, 20@24c.; 1913, 50c.; 1920, March, 60c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.57	$0.56	$0.60	$0.58
February	.57	.56	.65	.58
March	.56	.54	.65	.58
April	.56	.54	.65	.62
May	.56	.54	.65	.62
June	.56	.54	.65	.62
July	.56	.54	.65	.62
August	.56	.54	.65	.62
September	.56	.54	.63	.62
October	.56	.54	.65	.62
November	.56	.54	.65	.62
December	.56	.54	.65	.62
Year	.57	.54	.65	.58

Manila, Pale

On August 22, 1877, the price was 7½@8c.; March 18, 1881, 10@18c.; October 18, 1891, 17@25c.; 1901, 14@16c.; 1911, 15@18c.; 1913, 15@18c.; 1920, May, 30c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.25	$0.22	$0.21	$0.20
February	.24	.22	.21	.20
March	.24	.22	.21	.20
April	.21	.20	.21	.20
May	.21	.20	.21	.20
June	.21	.20	.21	.20
July	.21	.20	.21	.20
August	.21	.20	.21	.20
September	.21	.20	.21	.20
October	.21	.20	.21	.20
November	.21	.20	.21	.20
December	.21	.20	.21	.20
Year	.25	.20	.21	.20

Pontiak, No. 1

On July 1, 1907, the price was 17c.; October 18, 1911, 12½@13½c.; 1913, 13½@15c.; 1919, December, 45c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.25	$0.21	$0.20	$0.19
February	.24	.20	.20	.19
March	.21	.20	.20	.19
April	.20	.19	.20	.19
May	.20	.19	.20	.19
June	.20	.19	.20	.19
July	.20	.19	.20	.19
August	.20	.19	.20	.19
September	.20	.19	.20	.19
October	.20	.19	.20	.19
November	.20	.19	.20	.19
December	.20	.19	.20	.19
Year	.25	.19	.20	.19

Gilsonite

On May 27, 1907, the price was 2½@3½c. per pound; October 18, 1911, $36@50 per ton; 1913, $36@50; 1919, March, $60.

	Per ton			
	1921.		1922.	
	H.	L.	H.	L.
January	$65.00	$60.00	$70.00	$62.50
February	65.00	60.00	70.00	62.50
March	65.00	60.00	70.00	62.50
April	65.00	60.00	70.00	62.50
May	65.00	60.00	70.00	62.50
June	65.00	60.00	70.00	62.50
July	65.00	60.00	70.00	62.50
August	65.00	60.00	70.00	62.50
September	65.00	60.00	70.00	62.50
October	65.00	60.00	65.00	53.00
November	65.00	60.00	65.00	53.00
December	65.00	60.00	65.00	53.00
Year	65.00	60.00	70.00	53.00

Glues

Cabinet

On October 18, 1871, the quotation for white glue was 35@50c.; 1881, 15@24c.; 1891, 14@25c.; 1901, 18@23c.; 1911, 18@24c.; 1913, 13@15c.; 1917, October, 17c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.36	$0.24	$0.30	$0.18
February	.35	.24	.30	.18
March	.35	.20	.30	.18
April	.35	.20	.30	.18
May	.35	.20	.30	.18
June	.35	.20	.30	.18
July	.35	.20	.30	.18
August	.35	.20	.30	.18
September	.32	.18	.30	.18
October	.32	.18	.30	.19
November	.32	.18	.30	.19
December	.32	.18	.30	.19
Year	.36	.18	.30	.18

Common Bone

On October 18, 1871, the price was 18@25c.; 1881, 8@11c.; 1891, 7@9c.; 1901, 6½@8c.; 1911, 7½@9c.; 1913, 7½@9c.; 1917, August, 25c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.19	$0.16	$0.14	$0.08½
February	.18	.16	.14	.08½
March	.19	.13	.14	.08½
April	.19	.13	.14	.08
May	.19	.11	.14	.08
June	.18	.11	.14	.08
July	.18	.10	.12	.08
August	.18	.10	.12	.08
September	.16	.10	.12	.08
October	.14	.09	.14	.10
November	.14	.09	.14	.10
December	.14	.09	.15	.11
Year	.19	.09	.15	.08

Extra White

On November 1, 1876, the price was 38c.; October 18, 1881, 27@35c.; 1891, 18@25c.; 1901, 18@23c.; 1911, 18@24c.; 1913, 18@24c.; 1917, November, 45c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.45	$0.35	$0.40	$0.30
February	.45	.35	.40	.30
March	.30	.25	.40	.30
April	.40	.30	.40	.30
May	.40	.30	.40	.30
June	.40	.30	.40	.30
July	.40	.30	.40	.30
August	.40	.30	.40	.30
September	.40	.30	.40	.30
October	.40	.30	.40	.30
November	.40	.30	.40	.30
December	.40	.30	.40	.30
Year	.45	.25	.40	.30

Naval Stores: Market Review

The past year in the market for naval stores was notable for the frequence and sharpness of the fluctuations in turpentine, though there were many other developments of interest in both turpentine and rosin as well as in other products of the pine tree. In the case of turpentine the year was a period of abnormally high prices, due largely to a shortage in production not only in this country but also abroad. An urgent foreign demand for American spirits was something of a feature of the market at times, causing rapid advances in prices, especially during the summer and fall months. Also there was considerable buying of a speculative character by domestic traders at times, while unprecedented activity in construction work in all sections of the country was followed by a very heavy consumption of turpentine in painting operations. The consumption in other fields gradually increased during the year owing to steady improvement in general trade in this country.

Although prices throughout the year were maintained at levels well above those ruling in the previous year, there were sharp setbacks from time to time, especially whenever foreign buyers withdrew from the market on this side of the water. There were sharp reactions, too, in prices abroad and another factor which had a tendency to depress prices in this country at times was the fact that the movement of turpentine from the woods to the primary markets continued relatively large long after a diminution in the receipts had been expected, the failure of the movement to fall off being attributed to the abormally high prices prevailing.

The general course of rosin prices here and in Southern markets was similar to that taken by turpentine, although fluctuations were by no means so violent as those which characterized the market for turpentine, the market being less sensitive to bullish influences owing to the fact that there was no shortage of supplies, actual or prospective, consumers finding no difficulty in making purchases whenever fresh supplies were required. In this respect the situation differed greatly from that in turpentine, there being a very marked scarcity of sellers of the latter product at times. One encouraging phase of the situation during the year from the viewpoint of the seller of rosin was the size of the export demand, though a material increase in the purchases by Europe was offset in part by a decrease in the demand from countries outside of Europe.

Minor naval stores showed irregularity. The tendency of rosin oil was upward much of the time, while pine oil, on the other hand, took a downward course early in the year, though prices were about stationary during the latter part of the period. Tar oil and pitch were steady throughout the year. At the close of the year stocks of minor naval stocks appeared to be light as a rule, not only here but also in Southern markets, while stocks of turpentine and rosin in the woods were believed to be much smaller than usual, the high prices and the open weather prevailing having caused rapid marketing of the scrape crop.

Turpentine

The highest price recorded for spirits of turpentine in carload lots in the local market during the past year was reached in October, when there were sales at $1.64 per gallon. This price showed an advance of about 100 per cent. as compared with the low point of the year, which was established in January, and of nearly 100 per cent. as compared with the highest price of the previous year. The highest point reached during the year by wood turpentine was also recorded in October, when steam distilled touched $1.55 per gallon, or about 100 per cent. above the lowest prices established early in the year.

Spirits of turpentine, after selling in January at 82½c. per gallon, rose in February to 92c., reacted in March to 85c., rallied and advanced, touching 97c. in May. In June it moved upward rapidly, touching $1.48 per gallon, after which there was a reaction, the market receding to $1.16 in August, when it turned and advanced to $1.64, selling at that figure in October and November. The closing quotation for the year was $1.47 per gallon.

With the indications pointing early in the season to a production below normal abroad as well as in this country, the course of the London market was watched with unusual interest on this side of the water and the fluctuations in prices abroad had not a little to do with influencing the trend of primary markets in this country, especially when the swing of prices in the London market was upward, sharp advances in that center frequently presaging or accompanying an active foreign demand in this country. The apprehension displayed by foreign buyers concerning supplies, moreover, had the effect of stimulating the demand from consumers in this country, many of whom deferred making purchases early in the season in the belief that when the movement of the crop from the woods attained something like normal dimensions a month or two after the opening of the season on April 1 there would be no difficulty in securing supplies at lower prices.

Although the high prices prevailing during the year undoubtedly had the effect of curtailing consumption in some industries, there was an increase in takings by consumers in other fields, especially during the latter half of the year when the steady expansion in general business in this country was reflected in an increase in the call for turpentine. Consumption in the paint industry was very heavy throughout the year, the movement into consuming channels in this field being well above normal during the winter months owing to the unprecedented activity in construction work in many sections of the country, where comparatively mild weather prevailed much of the time, favoring building and prolonging painting operations.

Labor troubles on the railroads of the country interfered with the distribution of turpentine at times, but obstacles of this kind were overcome as the record of receipts and shipments from primary centers showed, the statistical position presenting a bullish appearance much of the time during the year, especially during the periods when the export movement was on a liberal scale. Some of the cargoes which left Atlantic ports for European destinations during the summer months were so large as to excite not a little comment in trade circles here and in the South. Stocks of turpentine in the woods at the close of the year were unusually small, this condition being attributed to the high prices and the open weather prevailing, which had the effect of stimulating outdoor work and caused exceptionally rapid marketing of the scrape crop.

Supplies Ran Short

The feeling in trade circles here and in the South at the close of the year was optimistic owing to the smallness of supplies still to come forward from the woods, the limited holdings among consumers everywhere, the indications that Europe would have to purchase considerable turpentine in this country before the opening of the new season, and the steady expansion in general business in this country.

An item of not a little interest to the naval store trade of this country appeared in a foreign review of the past year, in which it is stated that after many years of very slow development of the pine forests of northern India, which are entirely controlled by the Indian Government, production is being taken seriously in hand, and that a rough estimate has already been received stating that the quantity available for export during 1923 may reach 20,000 barrels.

Rosin

Fluctuations in rosin prices were confined within a moderate range during the early months of the year, common to good in the local market declining from a high point of $5.50 per unit in January to $5.25 in March, after which there was an upturn which carried the market to a high of $7.05 in October, declining subsequently to $6.35 per unit, which was reached in December. The high for the year was $7.05 per unit and the low $5.15, showing a swing below the low and the high of $1.90 per unit. In the opening month of the year the high for W. W. rosin was $7.75 per unit. It rose to $7.85 in February, reacted and declined, reaching $7.20 in May, then rallied and advanced to $8.25, reacted to $8 and subsequently rose to $8.25 in October. The latter figure was the highest point of the year, while the lowest was $7.20, showing a range between the low and the high of $1.05 per unit. The difference between the prices of the dark and pale grades showed a tendency to narrow as the year advanced owing to scarcity at times of the dark grades.

This narrowing of the difference between the low and the high grades was one of the few interesting and unusual developments of the year. Another feature of the situation which was noticeable during the year, however, was the resistance which the market displayed to depressing influences whenever the lower grades approached a $5 per unit level. Stocks of rosin in the three leading seaboard markets in the South at the close of the year were about 356,000 barrels, or about 20,000 barrels larger than at the close of the previous year and about 55,000 barrels more than at the same time in 1920. It is interesting to note that the receipts in these three markets from the opening of the season on April 1 to the close of the year were about 845,000 barrels, or about 140,000 barrels more than in the same time in the previous year.

Owing to the steady improvement in American trade sentiment in rosin circles at the close of the year with respect to the outlook for 1923 was very cheerful, especially as unsold supplies still to come forward from the woods were believed to be unusually small. This feeling of optimism was tempered by a conservative note, however, owing to the fact that stocks in the primary markets were liberal, and also because of what some regarded as indications of an increase in production during the coming season, some estimates as to the probable size of the increase in output ranging from 15 to 25 per cent.

Naval Stores: Record of Prices

Turpentine

Turpentine

On October 18, 1871, the price was 71@73c.; 1881, 52@53c.; 1891, 37@37½c.; 1901, 38@38½c.; 1911, 51c.; 1913, 45@45½c.; 1920, April, $2.65.

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.76	$0.70	$0.92	$0.82½
February	.62	.56	.92	.90
March	.61	.54	.85	.85
April	.64	.59	.86	.86
May	.68	.65	.97	.92
June	.65	.60	1.48	.95
July	.65	.60	1.25	1.20
August	.65	.58	1.30	1.16
September	.77	.65	1.34	1.23
October	.81	.74	1.64	1.36
November	.82½	.79½	1.64	1.55
December	.83½	.79	1.51	1.38
Year	.83½	.54	1.64	.82½

Turpentine, Wood, Steam Distilled

On May 13, 1907, the price was 63½c.; October 18, 1911, 50c.; 1913, 30@35c.; 1920, June, $2.30.

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.71	$0.69	$0.78	$0.78
February	.61	.53	.78	.78
March	.55	.50	.78	.78
April	.55	.52	.78	.78
May	.64	.55	.78	.78
June	.64	.59	.78	.78
July	.64¾	.55	1.20	1.12
August	.61	.55½	1.18	1.05
September	.74	.61	1.24	1.12
October.	.77	.71	1.55	1.24
November	.78	.78	1.55	1.48
December	.78	.78	1.45	1.30
Year	.78	.50	1.55	.78

Turpentine, Wood, Destructive Distilled

On May 13, 1907, the price was 63½c.; October 18, 1911, 45c.; 1913, 25@30c.; 1919, November, $1.60.

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.69	$0.68	$0.75	$0.75
February	.60	.51	.75	.75
March	.55	.50	.75	.75
April	.52	.50	.75	.75
May	.62	.52	.75	.75
June	.62	.58	.75	.75
July	.61¾	.52½	1.18	1.10
August	.55	.52½	1.15	1.03
September	.78	.55	1.20	1.09
October	.75	.69	1.40	1.20
November	.75	.75	1.40	1.34
December	.75	.75	1.28	1.18
Year	.78	.50	1.40	.75

Rosins

Rosin, Common Strained

On October 18, 1871, the price was $4 10@4.17½; 1881, $2.50@2.52½; 1891, $1.32½@1.35; 1901, $1.42½; 1911, $6.90; 1913, $3.95@4.25; 1920, May, $20.

	Per barrel			
	1921.		1922.	
	H.	L.	H.	L.
January	$8.50	$8.10	$5.50	$5.30
February	8.00	6.75	5.40	5.30
March	6.25	5.70	5.25	5.20
April	5.00	4.50	5.30	5.15
May	5.25	5.00	5.30	5.30
June	5.00	4.90	5.55	5.55
July	5.20	4.95	5.80	5.55
August	5.25	4.70	6.25	5.90
September	5.35	5.25	6.25	6.20
October	5.50	5.35	7.05	6.60
November	5.75	5.45	6.90	6.45
December	5.45	5.20	6.35	6.20
Year	8.50	4.50	7.05	5.15

Rosin, Florida, Grade I

On February 15, 1881, the price was $2.50; October 18, 1881, $7.50; 1891, $2; 1901, $1.75; 1911, $7.10; 1913, $4.10@4.15; 1919, September, $21.25.

	Per barrel			
	1921.		1922.	
	H.	L.	H.	L.
January	$9.00	$8.50	$5.60	$5.30
February	8.00	6.75	5.60	5.40
March	6.25	5.25	5.35	5.25
April	5.85	5.35	5.35	5.20
May	5.80	5.50	5.95	5.95
June	5.60	5.35	6.20	5.70
July	5.40	5.15	6.40	6.20
August	5.50	5.00	6.40	6.35
September	6.35	5.50	6.65	6.40
October	5.95	5.75	7.25	6.60
November	5.80	5.65	6.95	6.45
December	5.60	5.30	6.45	6.30
Year	9.00	5.00	7.25	5.20

Rosin, Florida, Grade K

On February 15, 1881, the price was $2.75; October 18, 1891, $2.20; 1901, $2.30; 1911, $7.15; 1913, $4.70@4.80; 1919, July, $22.75.

	Per barrel			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.00	$8.50	$6.15	$6.10
February	8.00	6.75	5.85	5.80
March	6.25	5.75	5.55	5.25
April	5.90	5.50	5.45	5.30
May	6.25	5.75	5.45	5.45
June	6.25	5.55	6.50	6.10
July	5.70	5.50	6.50	6.45
August	5.75	5.20	6.45	6.35
September	6.45	5.55	6.65	6.50
October	6.25	6.00	7.35	6.60
November	6.10	6.10	6.95	6.45
December	6.15	6.00	6.50	6.50
Year	9.00	5.20	7.35	5.25

Rosin, Water White

On January 21, 1885, the price was $5; October 18, 1891, $4; 1901, $4.10; 1911, $8; 1913, $6.95@7.10; 1919, September, $25.50.

	Per barrel			
	1921.		1922.	
	H.	L.	H.	L.
January	$9.25	$8.80	$7.75	$7.25
February	8.30	7.00	7.85	7.50
March	6.75	6.60	7.50	7.45
April	7.00	6.25	7.30	7.25
May	7.50	7.00	7.20	7.20
June	8.50	7.50	8.25	8.25
July	7.90	7.75	8.25	8.00
August	7.50	6.85	8.00	8.00
September	7.60	7.00	8.00	8.00
October	7.25	7.15	8.25	8.00
November	7.75	7.25	8.25	8.15
December	7.70	7.25	8.00	8.00
Year	9.25	6.25	8.25	7.20

Other Naval Stores

Pine Oil, Steam Distilled

On June 13, 1912, the price was 35@45c.; October 18, 1913, 35@45c.; 1920, July, $2.10.

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.60	$1.45	$1.20	$1.20
February	1.50	1.45	1.10	1.00
March	1.50	1.40	1.00	1.00
April	1.40	1.30	1.00	1.00
May	1.35	1.30	1.00	1.00
June	1.35	1.30	.95	.95
July	1.35	1.05	.80	.80
August	1.15	1.05	.80	.80
September	1.20	1.20	.80	.80
October	1.20	1.10	.80	.80
November	1.20	1.15	.80	.80
December	1.20	1.15	.80	.80
Year	1.60	1.05	1.20	.80

Tar, Kiln Burned

On October 18, 1871, the price was $3.25@3.37½c.; 1881, $3.25; 1891, $1.80; 1901, $1.90; 1911, $7.75; 1913, $7; 1920, February, $15.50.

	Per barrel			
	1921.		1922.	
	H.	L.	H.	L.
January	$15.00	$14.50	$10.00	$9.50
February	14.75	14.75	10.00	10.00
March	14.75	14.75	10.00	10.00
April	14.75	12.50	10.00	10.00
May	12.50	11.50	10.00	10.00
June	11.50	11.50	9.00	9.00
July	11.50	11.50	9.00	9.00
August	12.00	11.50	10.00	9.00
September	11.50	11.00	12.50	11.00
October	11.00	10.00	12.50	12.50
November	10.00	10.00	12.50	12.50
December	9.50	9.50	12.50	12.50
Year	15.00	9.50	12.50	9.00

Tar Oil, Genuine Distilled

On April 4, 1914, the price was 20@30c.; 1920, December, 77c.

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.77	$0.75	$0.50	$0.50
February	.76	.70	.50	.50
March	.70	.70	.50	.50
April	.70	.60	.50	.50
May	.65	.60	.50	.50
June	.65	.60	.50	.50
July	.65	.50	.50	.50
August	.50	.50	.50	.50
September	.50	.50	.50	.50
October	.50	.50	.50	.50
November	.50	.50	.50	.50
December	.50	.50	.50	.50
Year	.77	.50	.50	.50

Pitch

On October 18, 1871, the price was $4@4.25; 1881, $2.25@2.30; 1891, nominal; 1901, $1.60@1.75; 1911, $4@4.50; 1913, $4.25@4.50; 1920, June, $15.

	Per barrel			
	1921.		1922.	
	H.	L.	H.	L.
January	$10.00	$9.00	$6.00	$6.00
February	14.50	9.00	6.00	6.00
March	14.50	14.50	6.00	6.00
April	14.50	7.00	6.00	6.00
May	7.20	7.00	6.00	6.00
June	7.20	7.00	6.00	6.00
July	7.00	7.00	6.00	6.00
August	7.00	6.50	6.00	6.00
September	6.50	6.00	6.00	6.00
October	7.00	6.00	6.00	6.00
November	6.00	6.00	6.00	6.00
December	6.00	6.00	6.00	6.00
Year	14.50	6.00	6.00	6.00

Rosin Oil

On October 18, 1871, the price was 28c.; 1881, 14½c.; 1891, 10@10½c.; 1901, 15c.; 1911, 36c.; 1913, 27c.; 1920, January, 97c.

(First rectified)

	Per gallon			
	1921.		1922	
	H.	L.	H.	L.
January	$0.65	$0.60	$0.37	$0.36
February	.51	.47½	.37	.37
March	.47½	.40	.37	.37
April	.40	.40	.37	.37
May	.40	.36	.37	.37
June	.35	.35	.39	.37
July	.33	.33	.39	.39
August	.37	.35	.39	.39
September	.37	.37	.41	.39
October	.37	.35	.45	.41
November	.37	.35	.45	.45
December	.37	.37	.45	.45
Year	.65	.33	.45	.36

Rosin Oil

On October 18, 1871, the price was 32c.; 1881, 17½c.; 1891, 12c.; 1901, 17c.; 1911, 41c.; 1913, 38c.; 1920, February, $1.05.

(Second rectified)

	Per gallon— 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.67	$0.63	$0.39	$0.39
February	.53	.50	.39	.39
March	.50	.43	.39	.39
April	.45	.43	.39	.39
May	.45	.38	.39	.39
June	.38	.38	.41	.39
July	.35	.35	.41	.41
August	.39	.37	.41	.41
September	.39	.39	.43	.41
October	.39	.37	.47	.43
November	.39	.37	.47	.47
December	.39	.39	.47	.47
Year	.67	.35	.47	.39

Rosin Oil

On October 18, 1871, the price was 35c.; 1881, 20½c.; 1891, 14@14½c.; 1901, 19c.; 1911, 46c.; 1913, 48c.; 1920, March, $1.15.

(Third rectified)

	Per gallon— 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.70	$0.65	$0.47	$0.46
February	.55	.53	.47	.47
March	.53	.45	.47	.47
April	.55	.45	.47	.47
May	.55	.44	.47	.47
June	.44	.43	.49	.47
July	.40	.40	.49	.49
August	.43	.42	.49	.49
September	.44	.44	.50	.49
October	.44	.44	.52	.50
November	.44	.44	.52	.52
December	.47	.47	.52	.52
Year	.70	.40	.52	.46

Rosin Oil

On October 18, 1871, the price was 40c.; 1881, 23c.; 1891, 17c.; 1901, 21c.; 1911, 51c.; 1913, 60c.; 1920, January, $1.23.

(Fourth rectified)

	Per gallon— 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.85	$0.85	$0.53	$0.52
February	.78	.75	.53	.53
March	.75	.68	.53	.53
April	.68	.65	.53	.53
May	.65	.52	.53	.53
June	.52	.51	.55	.53
July	.48	.48	.55	.55
August	.52	.50	.55	.55
September	.52	.52	.56	.55
October	.52	.52	.58	.56
November	.52	.52	.58	.58
December	.53	.53	.58	.58
Year	.85	.48	.58	.52

Naval Stores Studied By Chemistry Bureau

In view of the campaign in Congress for Federal standardization of naval stores, the United States Bureau of Chemistry, paid much attention to these products during the past year. Investigations on the chemical properties of turpentine and rosin have been continued. To determine whether any differences other than color exist between the various grades and varieties of rosin, analyses were made of authentic samples originating at various points in the producing sections. It was found that there is a difference, although not a very marked one, between the chemical properties or constants of light colored rosins and those of dark colored rosins.

Incidental to this investigation it was found that the constants of rosin change, appreciably and rapidly on standing after being powdered. A sample of rosin produced about 50 years ago was found to have an abnormal tendency to crystallize, crystalline rosin acids being readily obtained from solutions in alcohol. A number of authentic samples of wood rosin examined differed from gum rosin, not only in having a lower melting point but also in having lower saponification, acid, and iodine numbers, and containing more unsaponifiable matter. Several samples of foreign rosins were also examined. Examination of old turpentine samples disclosed the fact that they had developed marked acidity and had a decided solvent effect on iron, zinc, and copper. Several samples of socalled "recovered turpentine" were found to contain oxidized and chlorinated bodies, in addition to the usual turpentine constituents, and were identified as a by-product from the manufacture of synthetic camphor.

In the investigation of analytical methods applicable to turpentine and rosin, a method for detecting and approximately estimating the quantity of coaltar adulterants in turpentine was devised and published. A study was made of the effects of various solvents upon the results obtained in determining acid and saponification numbers of rosin esters and similar bodies containing metallic resinates. An electrically heated instrument was devised for use in shaping and resurfacing the faces of rosin samples so as to facilitate more accurate grading.

Examinations of fifty-five samples of turpentine from small paint and general merchandise stores throughout the East showed that the practice of selling adulterated turpentine or mineral oil substitute for pure turpentine is still quite prevalent. In most cases from 10 to 20 per cent. of the samples from any locality were found to be aduleterated.

British Oil Cake and Meal

The disposal of the oil cake and meal residue in England, has an important bearing upon the price of the oil product. In each of the past three years the production of this cattle feed has been between 950,000 and 1,000,000 tons annually. Only a very small proportion is exported abroad—last year 42,119 tons, the balance remaining being added to by a net importation of 316,366 tons of foreign-made oil cake. The outlook for increased domestic consumption of concentrated cattle feed in these islands is regarded as most promising. In the past year the cake residue did not share fully in the lower prices generally of oil seeds, etc., the advantage being with the oil product. Prices of oil cakes are still 45 to 65 per cent. in excess of those ruling in 1913.

British Naval Stores Market Status, 1922

LONDON, March 1, 1923.

Supplies of turpentine in the year 1922 were not plentiful in any country. During the latter months of 1921 the home demand in the United States of America had been heavy and increasing. In the Spring of 1922 it became evident that this demand was being maintained, and as the new crop did not show promise of being any larger in volume than that of the previous year, there appeared to be every prospect of a world-wide shortage.

During the months of May and June there was never much more than one month's supply of turpentine in tank in London. This position of affairs was not helped by the fact that it was impossible during the first six months of the year to obtain French turpentine at prices which would compete with American c.i.f. prices. France had enjoyed a good demand at home and from other Continental countries, and appeared to be independent of London for the marketing of her output of turpentine.

Consumers both in America and the United Kingdom were reported to be none too well supplied, and forward business—apart from purely speculative transactions—had diminished greatly. A principle of "hand to mouth" buying became prevalent. This created a steady demand which helped to maintain prices at high levels.

Turpentine

During the month of June the spot price of turpentine in London rose from 67s. to 119s. per cwt. These high prices, however, made the import of French turpentine possible, and by the middle of July London stocks were augmented by over 1,500 barrels of the French product, with further shipments expected. Prices eased off considerably during the summer months, but October found Savannah and London with rapidly advancing markets, in consequence of the prospect of supplies being inadequate to meet the probable demand for the ensuing six months.

During November and December, however, the demand in America fell off considerably, and receipts from the scrape crop exceeded expectations. By this time the London stocks had been considerably augmented—both from America and France. Prices declined on both sides of the Atlantic, although the last few days of the year found the markets rising once more.

It is interesting to note that the total London deliveries for the year 1922 were 84,658 barrels, as against 94,889 barrels in the previous year—a decrease of 10,231 barrels. Of the total 1922 deliveries, 11,021 barrels were French.

Lowest and Highest Prices of American Turpentine on the Spot in London (Per Cwt.)

	1916 s. d.	1916 s. d.	1917 s. d.	1917 s. d.	1918 s. d.	1918 s. d.	1919 s. d.	1919 s. d.	1920 s. d.	1920 s. d.	1921 s. d.	1921 s. d.	1922 s. d.	1922 s. d.
January	48 9	57 3	52 0	55 0	122 6	128 9	105 0	105 0	156 6	193 0	80 0	100 0	68 3	74 6
February	46 3	50 6	52 0	56 9	124 0	124 9	100 0	100 0	200 6	210 0	60 0	80 0	65 6	73 9
March	46 3	61 6	51 6	54 9	124 0	124 3	95 0	95 0	217 6	246 0	48 0	60 0	61 3	68 0
April	44 6	51 0	52 6	54 9	124 0	124 3	95 0	99 0	191 0	220 0	44 6	73 6	66 3	85 0
May	41 3	44 0	52 6	55 3	118 0	120 0	99 0	105 0	185 0	210 0	81 0	105 0	67 9	90 0
June	38 6	42 6	54 0	55 0	116 0	118 0	87 6	105 0	142 0	170 0	74 0	85 0	67 0	119 0
July	38 6	42 0	55 0	56 3	116 0	116 0	86 0	123 0	140 0	190 0	75 0	115 0	93 0	114 0
August	41 3	42 10½	55 9	58 0	116 0	120 0	121 3	130 0	142 0	158 0	63 0	77 0	86 6	95 0
September	42 0	43 9	58 0	67 0	105 0	120 0	125 6	130 6	140 9	146 0	62 0	70 6	94 0	103 3
October	42 9	44 9	68 6	89 6	105 0	105 0	119 9	127 6	121 0	142 3	64 6	69 0	102 9	125 0
November	44 3	49 4½	90 0	113 0	•104 0	105 0	125 6	128 0	110 0	122 0	65 9	71 0	111 0	123 3
December	48 6	55 3	113 0	128 0	105 0	105 0	126 6	156 6	100 0	105 0	66 6	70 3	94 6	108 3

• Quotations are for French between November, 1918, and April, 1919.

Average Price of American Turpentine for Each Year from 1900 to 1922

	s. d.		s. d.		s. d.		s. d.		s. d.
1900	35 4	1905	45 7	1910	47 8	1915	38 5	1920	164 10
1901	27 1	1906	47 3	1911	47 9	1916	45 10	1921	72 9
1902	33 1	1907	44 3	1912	33 1	1917	66 1	1922	89 4
1903	42 2	1908	31 9	1913	30 1	1918	116 2		
1904	41 2	1909	33 11	1914	33 0	1919	111 2		
Average for 5 years	35 9	5 years	40 7	5 years	38 4	5 years	75 6	3 years	109 0
Average of 23 years, 55s. 7d.									

Total Exports from United States (Tons)

(320 American gallons, calculated as one English ton, equal 1,016 kilos)

1914-15	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.	1922-23.
36,914	30,102	30,564	16,676	13,021	33,537	27,191	32,804	.....
•25,952	•22,285	•18,605	•10,190	•6,706	•26,224	•17,717	•20,969	•18,816
†10,962	†7,817	†11,959	†6,486	†6,315	†7,313	†9,474	†11,835	.....

• Seven months, April-October.
† Five months, November-March.

Imports of Turpentine into Great Britain (Tons)

	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
From United States	14,725	20,902	18,429	10,132	1,011	19,057	16,575	12,950	16,949
From France	975	2,025	261	9	1,214	1,784	3,729	713	2,386
From Portugal and Spain	271	3,337	2,849	919	941	1,339	703	786	829
From Russia, Scandinavia, etc.	1,210	211	.....	.....	.....	562	628	279	113
From all other foreign countries	229	.....	.....	.....	.....	.....	924	696	144
Tons of 1,016 kilos	17,410	26,475	21,539	11,060	3,166	22,742	22,559	15,424	20,171
Percentage from United States	84.57	78.95	85.56	91.61	31.93	83.80	73.47	83.96	84.03
Percentage from France	5.60	7.65	1.21	.08	38.35	7.84	16.53	4.62	11.58
Percentage from Russia and Baltic	6.95	.80	.....	.....	.....	2.47	2.80	1.81	2.05
Percentage from all other countries	2.88	12.60	13.23	8.31	29.72	5.89	7.20	9.61	2.34

Stocks of Turpentine in London at End of Year (Barrels)

	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
American	22,148	32,952	36,785	17,774	2,586	29,776	46,565	14,168	17,454
French	1,378	1,341	521	67	2,213	454	4,108	246	2,113
Spanish, etc.	340	7,486	7,689	2,053	546	260	391	Not given	Not given
	23,866	41,779	44,995	19,894	5,355	30,490	51,064	14,414	19,567
Afloat	.....	.....	.....	.....	.....	.....	.....	.....	4,850
Totals	23,866	41,779	44,995	19,894	5,355	30,490	51,064	14,414	24,417
Price in London (American)	36s. 3d.	54s. 0d.	53s. 9d.	124s. 0d.	•105s. 0d.	156s. 6d.	100s. 0d.	68s. 3d.	103s. 9d.
Price in Savannah	42½c.	54c.	52c.	43c.	66c.	$1.60¾	Nom.	75½c.	$1.38½

• French quoted in 1918.

Rosin

Demand for rosin has been steady throughout the year, and prices have not varied to any great extent.

Prices of the dark grades in France have frequently been high in comparison with similar grades of American, and consequently the imports from France figure considerably under those of past years. (See below.) Import of French rosins was also often a question of exchange rates.

Average Monthly Quotations of Dark Rosin (Per Cwt.)

(Ex-wharf, London)

	1914. s. d.	1915. s. d.	1916. s. d.	1917. s. d.	1918. s. d.	1919. s. d.	1920. s. d.	1921. s. d.	1922. s. d.
January	9 11	11 1½	22 3½	26 9	65 1½	55 0	54 0	34 6	14 9
February	10 0	11 8	22 3	29 9	65 6	45 0	57 0	24 9	14 2
March	9 9	11 3½	21 4	32 4	64 6	40 0	58 0	17 6	13 0
April	9 6½	12 0	21 3	32 9	64 6	36 9	58 0	13 9	13 0
May	9 6	12 8	21 0	32 9	63 0	35 0	56 0	17 0	13 4½
June	9 5½	12 2	21 3	32 9	62 7½	38 3	50 0	17 0	13 7½
July	9 3½	12 2	21 0	32 6	60 0	38 6	45 0	15 9	13 10
August	11 0	11 9½	21 3	31 8	60 0	41 0	45 0	16 0	14 0
September	9 6½	12 2	21 6	33 0	55 0	48 0	47 0	17 0	14 6
October	8 2½	13 11½	21 6	34 11	55 0	50 0	46 0	16 9	15 8
November	8 7½	18 3½	21 9	46 6	55 0	50 0	45 0	16 3	16 3
December	9 4	21 6	24 5	60 6	55 0	50 0	39 0	16 3	15 0
Average of the year	9 6	13 5	21 9	35 6	60 5	43 11	50 0	18 6	14 3

Average Price Dark Rosin for Each Year, 1900 to 1922 (Per Cwt.)

	s. d.		s. d.		s. d.		s. d.		s. d.
1900	5 3	1905	9 1	1910	12 9	1915	13 5	1920	50 0
1901	4 9	1906	10 0	1911	16 4	1916	21 9	1921	18 6
1902	4 8	1907	10 5	1912	16 6	1917	35 6	1922	14 3
1903	6 1	1908	8 4	1913	11 9	1918	60 5		
1904	7 11	1909	8 8	1914	9 6	1919	43 11		
Average, 5 years	5 9	5 years	9 4	5 years	13 4	5 years	35 0	3 years	27 7
		Average of 23 years, 17s. 4d.							

Exports of Rosin from United States (Long Tons)

1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.	1922-23.
146,453	155,268	168,858	128,700	89,613	130,409	90,794	120,667	.....
•104,335	•86,387	•115,132	•91,084	•52,629	•76,916	•69,574	•62,495	•87,421
†42,118	†68,881	†53,726	†37,616	†36,984	†53,493	†21,220	†58,172	.....

• Seven months, April-October.
† Five months, November-March.

Imports of Rosin into Great Britain (Tons)

	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
From United States	53,907	52,931	73,745	65,134	18,275	57,240	31,283	19,401	43,057
From France	16,182	37,856	14,580	14,864	15,806	21,366	22,568	14,155	10,259
From Spain and Portugal	6,224	10,579	9,550	6,350	3,378	9,617	4,860	6,151	7,701
From all other countries	1,090	1,047	215	.....	162	798	1,765	1,237	2,604
Total tons of 2,240 lbs. (1,016 kilos)	77,403	102,413	100,090	86,328	37,621	89,021	60,476	40,944	63,621
Percentage from United States	69.64	51.68	75.68	75.43	48.58	64.30	51.78	47.39	67.67
Percentage from France	20.91	36.97	14.57	17.22	42.01	24.00	37.32	34.57	16.13
Percentage from other countries	9.45	11.35	9.75	7.35	9.41	11.70	10.95	18.04	16.20

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141 Milk Street, Boston, Mass.

Animal, Fish, Vegetable Oils: Market Review

The year 1922 in the market for miscellaneous oils, fats and greases was featured by two periods of pronounced activity at rising prices, the first developing towards the close of the first quarter and the second occurring in the final week of the year. Both were due largely to a sharp advance in cottonseed oil, but contributory influences were a material shrinkage in supplies following a period of curtailed production and a decrease in importations of foreign products as a result of high tariff rates.

During the greater part of the year, however, business was on a very conservative scale, the condition of general trade in this country, political disturbances abroad, unsettlement in foreign exchange and tariff uncertainties all having a tendency to create a feeling of hesitation among consumers, dealers, importers and manufacturers in all sections of the country. This had the inevitable effect, with the exception of the periods already referred to, of keeping business in all branches of the local trade within very moderate limits. Fluctuations in prices much of the time were correspondingly narrow.

There was no lack of interesting developments, however, despite the conservative character of business. Although the fluctuations in most of the vegetable oils were confined within comparatively unimportant limits, there were developments in the way of price changes in some products which excited interest and comment throughout this branch of the market. The course of China wood oil, for instance, was closely watched everywhere, and the same was true of other vegetable oils such as coconut and soya bean, as well as corn, peanut and palm oils.

The Oriental products were mainly under the dominance of crop, market and political developments in the Far East, this being especially true of China wood oil. As already intimated sensational developments in the matter of fluctuations in prices were lacking, but there were frequent twists and turns in primary market quotations which usually found prompt reflection in conditions here.

Some irregularity occurred in China wood oil during the first half of the year. Changes in prices were confined within rather narrow limits, however, and the tone of the market, on the whole, was firm during that period. The course of the primary situation was of a strengthening character and there was a steady demand here from the paint trade. During the latter half of the year the tendency of prices was downward in the main, though at the close a rally occurred on bullish developments in the primary situation, and at the end of the year the tendency of the market was strongly upward.

Shipments of crude soya bean oil from the Orient to this country showed a material falling off, due largely to tariff uncertainties, and for a considerable part of the year the market was bare of supplies, making it a nominal affair much of the time, although there was no lack of inquiries. During the last quarter of the year shipments to this country increased and sales were noted at gradually rising prices. Perilla oil, another product of the Orient, was also scarce throughout the year, owing to a shortage in the crop, and the tendency of prices was upward, with the bulk of the business in futures.

Copra a Bullish Factor

Developments in the copra situation abroad were in the main of a bullish character, and this imparted a firmer tone to the market for coconut oil, especially during the latter part of the year, when the strength of cottonseed oil was also a factor in the course of prices. Copra in the primary market was strengthened by competition between buyers, the demand from European crushers showing a material increase.

Fluctuations in palm oil were frequent, the tendency being upward in the main early in the year, after which there was a setback, due to a falling off in demand. Subsequently another upturn occurred on strengthening advices from primary sources and a shrinkage in supplies, the market being very firm at the close of the year. Olive oil foots was one of the most active oils on the list, and the market was generally steady or firm, though at one time weakness developed, in company with other vegetable products.

Cottonseed oil prices moved within relatively narrow limits in the early days of the year, with the trading quiet. About the middle of the first quarter of the year, however, speculation broadened and prices advanced. Factors in the rise were disappointing receipts of live hogs in Western markets, an advance in lard and a rise in crude oil in Southern markets. Subsequently there was a reaction in prices on an increase in the movement of hogs to market, improved prospects for the cotton crop and the practical closing of the export outlet for cottonseed oil by the increase in the tariff on imports of Oriental oils, which diverted such products to the markets of Europe. In the latter part of the year, however, prices again took an upward course on indications that the cotton crop would be smaller than was expected earlier in the season, and a rise in cottonseed and crude oil in Southern markets.

Frequent fluctuations in prices featured the markets for flaxseed and linseed oil during the year, oil following the course of seed. For a time the general trend of the markets was upward, owing to a shortage of supplies of domestic and foreign seed and a movement to increase the tariff on imports of both seed and oil. Imports of foreign oil were extremely heavy for a considerable period, but the enactment of tariff legislation was followed by a cessation of the importations. Later in the year the tendency of prices was downward at times, owing to an increase in the domestic crop of seed and a heavy production in Argentina. At the close of the year, however, prices were abnormally high, owing to a marked shortage of spot oil.

Animal Fats and Oils Irregular

Animal fats, greases and oils showed irregularity, changes in prices being frequent and at times sharp. Export business in most products fell off, the decrease in the shipments to Germany being sharp owing to the depression in that country's currency. Domestic consumption was stimulated to some extent, however, by the relatively high prices prevailing for some vegetable oils and fats. Demand for lard, for instance, was increased at times by the high cost of cottonseed oil. Production of hogs increased and the number of hogs on the farms of the country at the close of the year was considerably larger than at the end of the previous year.

At the opening of the year fish oils were in many instances lower than in the early days of the previous year, but the tendency of not a few products was upward later, and during the last quarter of the year advances in prices were frequent. Production of many oils was below normal, and during the latter part of the year there was a noticeable scarcity, the tone of the market at the close being distinctly firm.

Vegetable Oils

China wood oil moved within a range of 3 cents per pound during the past year, the highest point of the year being reached in February, when there were sales at 14¾c. per pound on spot, and the lowest price being reached in July, the market touching 11¾c. During the latter part of the year the tendency was upward in the main, though changes were generally narrow. At the close of the year, however, the situation was bullish, the primary market having been practically cleared of supplies and the indications pointing to scarcity during the early months of the new year. The consumption in this country for the past year was heavy and takings by Europe were also apparently large.

Fluctuations in coconut oil did not cover a very wide range, but there were several periods of activity during which the tendency of the markets here and on the Pacific Coast was upward, stimulating factors being strength in cottonseed oil, a rise in copra in primary markets, due to a shortage in production, and an increased demand from the soap industry. Changes in prices during the year covered a range of about one cent a pound, the highest prices in most instances being recorded during the first quarter of the year and at the close. Copra did not show much change until late in the year, when the tendency of prices abroad and here was upward.

Corn oil felt the strengthening effects at times of bullish developments in cottonseed oil. At one time crude corn oil sold at 11½c. per pound in barrels, that price being touched in April, which was the high point of the year. Later the tendency was downward and in September the market reached 8.42c., after which there was an upward movement, the market closing firm. Refined corn oil followed in the wake of crude, selling at about 13c. a pound in barrels at one time, after which there was a decline, the market touching 10.42c. in September and then rallying.

Olive oil foots sold early in the year at 8c. per pound on spot for prime green, advanced to 9c. in March, then weakened and declined, touching 8¼c. in July, after which there was an upturn to 9½c., the market being firm at the close of the year. Demand was fairly active throughout the year and at times spot supplies fell to very small dimensions. Denatured olive oil was practically stationary during much of the time, the high price for the year being $1.15 per gallon and the low $1.10. The situation presented few features of interest, trade being routine. Edible oil prices moved within a range of 35c. per gallon, the highest point of the year being touched in May, when a basis of $2 per gallon was established, after which the market weakened, declining to $1.65 per gallon.

Palm oil fluctuations were not very pronounced as a rule. Lagos moved within a range of 1½c. per pound, the low point for the year being reached in September, when there were sales at 6¾c. per pound, after which there was an advance to 7⅝c. in December. The highest price of the year, however, was established in March, when the market touched 8¼c. per pound. Domestic peanut oil brought high prices during the past year, the market being 11c. or above per pound for crude much of the time, owing to shortage of supplies, due partly to an increase in the tariff, which cut off importations of Oriental product. Refined oil also sold at high prices, the market advancing from 10¾c. per pound in January to 15c. in December.

Scarcity featured the market for perilla oil throughout the year and prices ruled firm, the tendency being strongly upward at the close, owing to scarcity of both seed and oil abroad. Refined rapeseed oil fluctuated within a range of 6c. per gallon, the highest point of the year being reached in February and the lowest in October. Soya bean oil was in light supply last year, importations having been greatly curtailed by the tariff, and at times the market was merely a nominal affair. Importations increased late in the year, however, owing to the high prices ruling for competitive oils, and towards the close of the year there was considerable business in futures at rising prices.

Animal Fats and Oils

Export business in animal products was curtailed by the decline in foreign currencies, the shipments of lard to Germany being much smaller during the past year than in the preceding year. The market for lard at the opening of the year was steady, and a firmer tendency soon developed, owing to disappointing receipts of hogs, and prices advanced rather sharply. Later on there was an increase in the movement of hogs to market and with export trade slow prices declined, but subsequently again moved upward on bullish developments in other provisions and an increase in speculative operations for a rise. The market was firm at the close of the year despite the fact that stocks of hogs were considerably larger than at the end of the previous year. The highest price established for city lard was $12.50 per 100 pounds, this level being reached in March and December, while the low point for the year was $9.50, which was touched in January.

Tallow displayed not a little firmness at times during the year, especially towards the close, when prices moved upward on a shortage in supplies, city special selling at 8c. in December, which was the highest price recorded during the year. Oleo stearin was 8c. at the opening of the year, which was the lowest price recorded during the twelve months. There were frequent fluctuations, the market touching 12c. at one time. House grease fluctuated within a range of 2c. per pound, the low price being 4¾c. and the high 6¾c. There was a good inquiry for all descriptions and at times not a little scarcity prevailed. The tendency of red oil was upward at times, the market closing firm at the year end on the basis of 10½c. per pound for saponified, as compared with 8c. at the opening of the year. Stearic acid also displayed firmness, though changes in price were slight until late in the year, when there was an advance.

The course of animal oils was governed chiefly, as usual, by the developments in basic material. Early in the year some manufacturers of animal oils changed the method of quoting these products to the basis of 100 pounds, instead of gallons. There was some improvement in export trade in oleo oil at times, but as a rule foreign business was quiet owing to the unsettlement in exchange. During the last half of the year the general tendency of prices was upward and at the close all products were firm owing to the high cost of raw material. No. 1 lard oil sold at $12.50 per 100 pounds in December, as compared with $9.75 in June.

Fish Oils

There was some irregularity in fish oils at times, but such periods of weakness as developed were of short duration. The production of many oils was lighter than in the previous year and at no time was there any pressure of supplies upon the market, such declines as occurred being traceable mainly to a temporary falling off in demand. The production of cod oil in Newfoundland was considerably below that of the previous year and the tendency of prices was upward much of the time. The low point of the year was established in January, when 45c. per gallon was quoted on spot. In March there was an advance to 60c. per gallon, after which the market declined to 54c., rising later to 60c., in December, where it closed with the tendency upward.

Menhaden oil displayed firmness much of the time, the market being influenced early in the year by the smallness of supplies of both crude and refined carried over from the previous season, and later by unfavorable reports in regard to fishing operations, the catch being comparatively small and the quality of the fish being poor. By the close of the year the bulk of the production of crude had been sold, only a few thousand barrels remaining in the Chesapeake Bay and Florida districts, while stocks of refined were exceptionally small. Southern crude moved within a range of 20c. per gallon during the year in the Baltimore market, the lowest price recorded being 35c. per gallon, in January, and the highest 55c., which was established in November. Light bleached menhaden sold at 49c. per gallon in the opening month of the year and at 70c. in December.

Bleached sperm oil was maintained at $1.62 per gallon from January until the close of October, declining in the following month to 99c. per gallon in the New Bedford market. Crude whale oil was stationary at 38c. per gallon, f.o.b. Pacific Coast, in sellers' tank cars, during the first half of the year, but in July there was an advance of 45c. per gallon, and that price remained in effect during the remainder of the year. Refined whale oil was quoted at 70c. per gallon for bleached winter during the first two months of the year, advancing in March to 75c., where it was maintained until the close of the year.

Changes in sardine and salmon oil were not very sharp, but the tendency of prices on the whole was upward, owing to gradually diminishing supplies.

Cottonseed Oil

Business in cottonseed oil and other products of cottonseed was on a comparatively small scale in the early weeks of the past year and changes in prices were confined within rather narrow limits. About the middle of the first quarter of the year, however, speculation in refined oil became more active at advancing prices and this had a stimulating effect upon Southern markets for other products.

Speculation in refined oil futures was stimulated by a disappointing movement of live hogs to Western markets, which caused a sharp advance in the Chicago market for lard. Marked changes in the course of the lard market invariably react upon the market for cottonseed oil, and in this instance the advance in the former product attracted speculators for the rise in cottonseed oil. Advances in various other vegetable oils contributed to this bullish sentiment.

At the opening of the year prime summer yellow cottonseed oil sold here at 8.20c. per pound and crude oil sold in the Southeast at 7c. per pound. In February the former rose to 9.40c. and in March to 11.75c., while the latter advanced in February to 8.50c. and in March to 10.25c. Western, Southern, Wall Street and Cotton Exchange operators bought futures freely.

In April, however, a reactionary tendency developed. The hog movement increased, lard prices weakened and bullish speculation in cottonseed oil received a check. Refiners and packers withdrew from the Southern markets for crude oil and offerings of this product increased. The trend of prices was downward much of the time thereafter until September, when prime summer yellow touched 8.20c. here, and crude had fallen in the Southeast to 6.25c., as compared with 11.75c. and 10.25c. respectively early in the year. Cotton crop prospects, which were unfavorable in the early stages of the season, became more encouraging later on, and the indications pointed to a crop materially larger than in the previous year. Another depressing factor was a decided falling off in the export trade in cottonseed oil, the slump being due to the increase in the tariff on imports of foreign vegetable oils into this country, which diverted such products to Europe and greatly increased the consumption of these oils at the expense of American cottonseed oil.

Later in the year, however, there was a change for the worse in cotton crop prospects and, with cotton advancing rapidly, there was an upturn in cottonseed oil here and in the South. Speculation for the rise again became active, Western, Southern and Cotton Exchange interests participating. In October prime summer yellow cottonseed oil sold here at 8.35c. per pound and crude oil sold in the Southeast at 6.25c., while by the close of the year prices had risen to 11.25c. and 9.125c. per pound respectively, the market at the end of the year being firm with the tendency of prices upward.

Exceptionally high prices prevailed for seed in the South much of the time, especially during the latter part of the year, $50 or above being demanded in some sections. Farmers in the South were in a strong financial position owing to the extremely high prices received for cotton, and they were not disposed to sell seed very freely.

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Linseed Oil

One of the most important events in the market for linseed oil last year was the increase in the tariff on importations of foreign to 3.3c. per pound, or equal to about 26c. per gallon, as compared with the old duty of 10c. per gallon. This had the effect of shutting out foreign oil. Prior to the enactment of this legislation the foreign crushers had a very large market in this country, owing to the fact that the tariff on seed and the old rate on oil operated against domestic crushers, and as a result the shipments of oil from England and the Continent to this side of the water attained very heavy proportions.

During the first eleven months of 1922 the shipments of oil to this country from Great Britain alone amounted approximately to 58,000 tons, while there also were heavy imports from Holland and Belgium. The revision of the tariff put an end to this trade, causing a collapse in linseed oil prices abroad and strengthening the market here.

There were frequent fluctuations in prices for flaxseed and oil during the past year, the changes being rather sharp at times, with oil following the course of seed. For a time the general drift of prices was upward. In January the spot price of linseed oil in carload lots, cooperage basis, was 64c. per gallon. In February the price rose to 86c. per gallon, showing a rise of 22c. The crop of seed in Argentina was smaller than in the preceding year and stocks of seed in domestic markets fell to very small proportions. This fact aided bullish manipulators. Speculators for the rise in seed were also favored by a shortage of freight cars in this country, which hampered the movement of seed to the primary markets.

Later in the year the tendency of seed prices was downward, and this imparted an easier tone to the market for oil, though smallness of supplies of spot oil prevented any material reaction in prices. Prospects of a record breaking crop of seed in Argentina had the effect not only of causing weakness in seed but of making consumers of oil hold aloof from the market in the hope of making purchases later on at lower prices.

Declines in oil prices were comparatively slight, however, though at one time in July the price fell to 80c. per gallon, as compared with 90c. in May. The market soon commenced to move upward again, however, ending the year at 90c. per gallon, with the tone of the market firm, due to the smallness of supplies of spot oil.

Production of Flaxseed
Argentina, Canada, India and United States
1889 to 1922

Compiled by Statistical and Historical Research Division of United States Department of Agriculture

Year.	Argentina.	Canada.	India.	Total. (A., C. & I.)	United States.
1889	.....	.....	.....	.....	.....
1890	.....	.....	.....	.....	.....
1891	.....	138,519	.....	.....	.....
1892	.....	.....	.....	.....	.....
1893	1,967,850	.....	.....	.....	.....
1894	4,722,840	.....	.....	.....	.....
1895	10,626,390	.....	.....	.....	.....
1896	9,130,824	.....	.....	.....	.....
1897	7,281,045	.....	8,839,320	.....	.....
1898	6,297,120	.....	17,838,800	.....	.....
1899	8,619,183	.....	17,115,760	.....	19,979,000
1900	8,855,325	.....	11,827,360	.....	.....
1901	15,349,230	172,164	13,040,960	28,562,354	.....
1902	14,365,305	.....	14,076,840	.....	29,285,000
1903	28,082,827	879,862	19,262,720	48,225,349	27,301,000
1904	36,916,866	635,543	22,873,280	60,425,689	23,401,000
1905	29,124,180	608,242	13,896,000	43,628,422	28,478,000
1906	23,299,344	1,023,510	14,128,000	38,450,854	25,576,000
1907	32,508,829	1,732,065	17,008,000	51,248,885	25,851,000
1908	43,332,057	3,165,320	6,528,000	53,025,377	25,805,000
1909	41,272,668	4,833,868	11,908,000	58,021,536	19,513,000
1910	28,203,817	3,501,222	17,112,000	48,817,039	12,718,000
1911	23,417,415	4,245,073	22,852,000	50,514,488	19,370,000
1912	22,512,204	18,039,359	25,796,000	66,347,563	28,073,000
1913	44,473,410	17,539,000	21,684,000	83,696,410	17,853,000
1914	36,917,496	7,175,200	15,448,000	59,540,696	13,749,000
1915	44,992,922	6,114,000	15,880,000	66,986,922	14,030,000
1916	35,228,451	8,259,800	19,040,000	62,528,251	14,296,000
1917	3,994,736	5,934,900	21,040,000	30,969,636	9,164,000
1918	10,583,177	6,055,200	20,600,000	46,238,377	13,369,000
1919	28,148,126	5,472,800	9,400,000	43,021,000	7,961,000
1920	42,038,465	7,997,700	16,760,000	66,796,000	10,774,000
1921	50,470,000	4,112,000	10,800,000	65,382,000	8,029,000
1922	32,272,000	5,008,000	17,360,000	54,640,000	12,238,000

Flaxseed Acreage
Argentina, Canada, India and United States
1889 to 1922

Compiled by Statistical and Historical Research Division of United States Department of Agriculture

			India			
Year.	Argentina.	Canada.	Area in linseed.	Area in linseed.	Total (A., C. & I.)	United States.
1889	.....	.....	.....	.....	.....	.....
1890	.....	.....	.....	.....	.....	.....
1891	.....	.....	.....	.....	.....	.....
1892	.....	.....	.....	.....	.....	.....
1893	.....	.....	.....	.....	.....	.....
1894	.....	.....	.....	.....	.....	.....
1895	.....	.....	.....	.....	.....	.....
1896	957,078	.....	.....	.....	.....	.....
1897	.....	.....	2,020,747	345,000	.....	.....
1898	.....	.....	2,707,887	425,000	.....	.....
1899	822,319	.....	2,829,475	445,000	.....	2,111,000
1900	878,018	.....	1,648,903	409,000	.....	.....
1901	1,500,767	23,086	2,417,991	466,000	4,407,844	.....
1902	1,934,496	.....	2,546,604	498,000	.....	3,740,000
1903	3,230,081	88,331	2,592,237	621,000	6,531,649	3,233,000
1904	3,674,377	51,712	3,609,079	592,000	7,927,168	2,264,000
1905	2,675,821	52,234	3,747,400	647,000	7,122,455	2,535,000
1906	2,527,294	98,442	2,711,800	567,000	5,904,536	2,506,000
1907	2,942,089	160,931	3,110,200	633,000	6,846,220	2,864,000
1908	3,438,315	324,177	1,830,400	269,000	5,861,892	2,679,000
1909	3,791,255	352,214	2,498,000	499,000	7,140,469	2,083,000
1910	3,596,788	452,503	*3,188,100		7,237,391	2,467,000
1911	3,715,939	582,374	3,742,400		8,040,713	2,757,000
1912	4,027,730	1,420,742	5,038,000		10,486,472	2,851,000
1913	4,283,058	1,552,800	4,124,900		9,960,758	2,291,000
1914	4,396,774	1,084,000	3,031,000		8,511,774	1,645,000
1915	4,722,743	463,359	3,325,000		8,511,774	1,387,000
1916	4,000,549	657,781	3,333,000		7,991,330	1,474,000
1917	3,207,358	919,500	3,564,000		7,690,858	1,984,000
1918	3,233,551	1,068,120	3,797,000		8,098,671	1,910,000
1919	3,418,999	1,093,115	1,989,000		6,501,114	1,572,000
1920	3,521,669	1,428,164	3,103,000		8,052,833	1,757,000
1921	3,484,000	533,000	2,268,000		6,285,000	1,108,000
1922	3,892,000	565,000	2,993,000		7,450,000	1,308,000

* Average of flaxseed grown as a mixed crop.

Vegetable Oil Industry in Great Britain in 1922

HULL, Eng., March 1, 1923.

The expansion in the vegetable oil trade in Great Britain, which was looked forward to with some degree of confidence in the earlier months of 1922, failed to mature. The oil seed crushing industry, however, can look back upon a moderately satisfactory year, one at about the average of the preceding two years.

The oilseed crushing mills of Great Britain and Ireland (as the United Kingdom must henceforth be known) have to rely upon the importation from abroad of practically the whole of their raw material: linseed from the Argentine and India, cottonseed from Egypt and India, rapeseed, castor seed and many other oilseeds also from India, soya beans from Manchuria, palm kernels and groundnuts from Africa, copra from islands in the Pacific, and so on. Fortunately, supplies have been ample for all requirements and the imports slightly in excess of those of 1921.

The gross imports of all oilseeds, oilnuts and kernels were no less than 1,367,399 gross tons, and the net imports, after deducting re-exports of 1 per cent., 1,327,810 tons, as compared with 1,296,799 tons net in 1921 and 1,349,892 tons net in 1920 (revised figures).

Seed Imports Increased

An interesting feature has been the steady increase in the quantity of oilseeds imported—last year they exceeded in the aggregate a million tons—and a gradual decline in the quantity of oilnuts and kernels, which last year totaled 365,085 tons gross import against 394,726 tons in 1921 and 477,594 tons gross in 1920. This latter branch of the industry was before the war of only small proportions in Britain and was for the most part carried on in Germany at the mills at Hamburg and Harburg. The seclusion of Germany during the war gave Britain her chance, and large extracting mills were erected at Hull and elsewhere to handle the palm kernels and groundnuts exported from British West Africa. Another feature was the smaller quantity of linseed received, over 110,000 tons less than in the preceding year, but this was compensated for by the much heavier supplies of cottonseed, which were 483,623 tons, against 376,518 tons, an increase of 107,000 tons, and larger arrivals of other kinds of oilseeds. This had, of course, some effect upon the total production of vegetable oils, which, on the basis of the commercial yield of oil from the net imports, is estimated as follows:—

Oil Materials Imports

(In gross tons)

	1920.	1921.	1922.
Linseed oil	125,000	155,000	117,450
Cottonseed	75,300	63,000	81,000
Rapeseed	9,200	9,400	11,675
Castor seed	4,325	3,558	7,815
Other seed oils	8,000	9,600	19,450
Coconut oil	24,700	22,092	38,320
Palm kernel	128,200	95,700	92,920
Groundnut	49,200	33,750	24,845
Other nut oils	2,000	7,530	310
Totals	425,980	399,300	393,845

Consumption Declined

Regarding trade conditions the consuming industries such as paint and varnish, linoleum and oil cloth, soap and the like, have taken reduced quantities of technical oils, and the trade in edible oils has shown a remarkable falling off. Owing to the lower purchasing capacity of the wage-earner arising out of a very high level of unemployment and the competition of foreign made margarin and butter, the requirements of English margarin, compound fats for cooking and other purposes have been smaller, and in consequence the demand for edible oils on domestic account has registered an equivalent decline.

With regard to linseed oil, things would have gone very badly if it had not been for a very considerable demand from the United States, shipments to this destination being exceptionally large, representing 80 per cent. of the total quantity exported and 40 per cent. of the entire British production. In previous years the trade in this commodity with America had been only within modest compass. Last year, however, the shortage of domestic production in the United States gave a decided fillip to the demand for British and Continental linseed oil and had a very marked influence upon prices.

Linseed Oil Prices

Raw linseed oil at the beginning of the year was dealt in at £27 10s. per ton naked ex Hull mill (this being the lowest figure of the whole twelve months). It gradually hardened and before January was out £32 was paid, but £31 was accepted early in February, when the market again improved to £37 5s., only to quiet down to £34 by the end of March. Trade in this period was largely on home account, with some continuance of the American demand which had begun on a fair scale in the latter months of 1921. During early April on further orders from America there was a sharp advance to £44 10s. paid, the highest point of the year.

From this time the market was very nervous, as it was thought that at any time the American tariff bill would pass into law and by the high level of duty on linseed oil prevent any more export in that direction. However, this did not happen until the fall, and America being a buyer from time to time of large lots, prices were about maintained till early August, the selling spot price then being £43 10s. With the subsidence of the American demand the market started on the down grade and by the end of the month was £6 per ton lower. During September to December the spot price ranged from £34 to £39, the forward positions being all the time offered at some pounds per ton discount, but as each month came to be settled, it was found there was a big oversold account. Crushers were at no time willing sellers of forward positions.

Much of the linseed oil exported to America was shipped in bulk from Hull in the water ballast tanks of the ordinary cargo steamers on the regular turn between Hull and New York. Hull alone thus shipped to the United States close upon 27,000 tons and probably approaching 20,000 tons were also shipped from London, Liverpool and other English ports. On the other hand, trade in this commodity with European countries fell off to an enormous extent, to about 25 per cent. of the previous year. The factors influencing this were the continuance of disturbed economic conditions in many of the European states, the fluctuating exchanges against the buyer and the fact that the Continental mills crushed a large quantity of linseed, almost equaling that of the preceding year. Both flaxseed and linseed oil were dearer than in 1921, and there was some improvement in the quality of flaxseed, both Plate and Indian. The average price of spot oil at Hull mill was £37, with oil crushed from seed from Russian Baltic ports at a premium of about £6 per ton.

Cottonseed Oil Conditions

Crude cottonseed oil fluctuated somewhat and met with a poor inquiry in the summer months when the lowest values were touched. In October a strong demand set in and a large business in Egyptian crude was done from Hull, as crushers were freely offered the new crop seed, and this continued up to the beginning of December. The highest price for Egyptian crude was £42 10s. registered in May, when stocks were low, and the lowest was £39 in September, a reversal of the general order of the market.

Soap makers' grade of ordinary refined does not appear to be any longer a speculative market, and during the year it was only influenced by the supply and demand. Between January and August it ranged from £36 to £42; during September the price was marked down to £32 10s., the lowest of the year, but later hardened to £37, at which the year closed, with very little trade passing.

Refined cottonseed oil of the finest edible quality was able to find satisfactory markets abroad. This was attributed to the scarcity and high prices of American "butter" oils, which gave the English equivalents in cottonseed, soya and rape oils a chance to compete. In particular, large quantities were exported to Holland and Germany.

Other Oils

The increased exports of crude soya bean oil in bulk from the Far East made soya bean a difficult article to work, as the demand for the cake and meal products from Europe were, in view of the troubled exchanges, smaller than usual. There are, however, indications that more soya beans will be handled in the mills in Britain and Ireland in the coming year. The lowest price taken for crude soya bean oil produced in English mills was £31 10s. in January and February, after which the market became firmer until £40 15s. was reached in June. It later gradually sagged to £34 in September. During the latter part of the year supplies were small and prices ranged between £35 and £37, at which latter figure the year closed.

Rape oil was in increased production and a steady level of prices was maintained. At the beginning of January last year the price of crude was £45 per ton. It sharply advanced to £50, but fell during February and March to £41. April and May saw the price harden to £43. The lowest price touched was £38 in September, since when it steadily improved, with £42 10s. bidding for prompt oil in December.

Prices of castor oil declined during the year to the extent of about £8 per ton for first pressure, the quotation at the close being £43 per ton naked ex-Hull mill. A better demand is reported than in 1921. The consistently good quality of English castor oil and the fact that it is available whenever required are being more and more appreciated by users. Reluctance to cover forward requirements is still noted and has perhaps been justified, but the time is regarded as having arrived when more confidence may be shown, especially as visible supplies of raw material are scarce and dear.

Palm kernels and plam kernel oil proved disappointing to Hull crushers, and a falling away as compared with other centers is recorded. The chief difficulty has been the sale of the oil product, which has been slow owing to the lessened demand caused by the competition of imported coconut oil. Groundnuts also made a relatively poor showing. Cakes were slow of sale and suffered from the competition of the Indian-made substitute. Crushers therefore had to rely upon getting a high price for the oil, and this was at too high a figure as compared with other oils. The average of palm kernel oil was £36 10s., which was considered cheap in comparison with competing oils. Crude groundnuts oil averaged £44, or £2 more than in 1921. All prices quoted above are per gross ton naked ex-mill.

Vegetable Oils Exported

The exports of vegetable oils produced or refined in Great Britain and Ireland over the past three years were as under:—

(In gross tons)

	1920.	1921.	1922.
Unrefined oils—			
Castor	4,130	3,887	4,178
Coconut	688	435	259
Cottonseed	5,688	2,111	1,389
Linseed	48,421	55,252	59,548
Olive	46	12	19
Palm	1,282	1,021	394
Palm kernel	18,036	12,988	6,270
Rape	7,042	2,692	4,945
Soya bean	10,435	9,887	8,106
Other seed oils	4,242	5,148	4,500
	100,010	93,433	89,608
Refined oils—			
Coconut	2,111	1,590	1,414
Cottonseed	11,597	8,262	9,318
Olive	252	61	78
Palm	1,463	701	528
Palm kernel	2,255	2,297	1,811
	17,678	12,931	13,149
Grand totals	117,688	106,364	102,757

Vegetable Oils Imported

In addition to domestic production Britain imported large quantities of vegetable oils, unrefined and refined from abroad. The crude oil, which had a gross import of 140,708 tons, consisted for the most part of coconut, palm and soya been oils; these together amounted to 120,172 tons, equal to 86 per cent. The details of the gross imports are officially returned by the Board of Trade as follows:—

(In gross tons.)

	1920.	1921.	1922.
Unrefined oils—			
Castor	420	510	2,515
Coconut	63,059	42,669	28,549
Cotton	2,613	2,655	1,576
Linseed	1,595	87	4,064
Olive	1,872	2,223	2,810
Palm	99,946	58,359	71,266
Palm kernel	5,241	2,721	442
Rape	1,403	500	1,251
Soya bean	17,991	16,473	20,357
Other unrefined	20,369	2,109	7,938
	214,469	136,286	140,708
Refined oils—			
Coconut	3,018	10,555	9,841
Cottonseed	7,353	15,642	3,222
Olive	2,527	2,342	4,984
Palm and palm kernel	393	1,025	123
	13,291	29,563	18,170
Grand totals	227,760	165,849	158,878
Deduct re-exports	39,896	25,819	22,324

The re-exports of unrefined included palm oil of 19,839 tons, coconut oil 1,259 tons, soya 183 tons and olive 68 tons; and the refined coconut 847 tons, olive 76 tons, cotton 50 tons and palm and palm kernel 2 tons.

Stocks on Hand

Summarizing the oil position of Great Britain and Ireland the supply is as follows:—

(In gross tons.)

	1920.	1921.	1922.
Domestic production	425,980	399,300	393,845
Deduct exports	122,665	105,364	102,757
Net remaining	303,341	292,936	291,088
Add net imports	187,791	142,052	136,554
Balance remaining in Britain	491,286	434,990	427,642

Animal, Fish, Vegetable Oils: Record of Prices

Animal Oils

Degras, American

On November 28, 1903, the price was 2½@2¾c.; October 18, 1911, 2¼c.; 1913, 3c.; 1918, October, 26½c.

(In barrels)

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.06	$0.05	$0.04	$0.03¾
February	.05	.04¾	.03¾	.03¾
March	.06	.05	.03¾	.03¾
April	.05	.05	.04½	.04½
May	.05	.04	.04½	.04
June	.04¼	.04	.04	.04
July	.05½	.03¾	.04¼	.04
August	.03¾	.03¾	.04¼	.04¼
September	.03¾	.03¼	.04¼	.04¼
October	.03½	.03¼	.04¼	.04¼
November	.04	.03¼	.04¾	.04¾
December	.04	.04	.04¾	.04¾
Year	.06	.03¼	.04¾	.03¾

Degras, English

On January 20, 1875, the price was 7½@8c.; October 18, 1881, 9½@10c.; 1891, 3½@3½c.; 1901, 3½@3¾c.; 1911, 2¾c.; 1913, 3¼@3¼c.; 1918, October, 28c.

(In barrels)

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.05½	$0.05¼	$0.03¾	$0.03¾
February	.05¼	.05	.03¾	.03¾
March	.05¼	.05¼	.03¾	.03¾
April	.05¼	.05¼	.04½	.04½
May	.05½	.04¾	.04	.03¾
June	.04¾	.04½	.03¾	.03¾
July	.04¾	.04¼	.04	.03¾
August	.04¼	.04¼	.04	.04
September	.04¼	.04	.04	.04
October	.04¼	.03½	.04	.04
November	.03¾	.03½	.04½	.04½
December	.03¾	.03¾	.04½	.04½
Year	.05½	.03½	.04½	.03¾

Horse Grease

On March 24, 1875, the price was 80@85c.; the next quotation was November 29, 1913, 6¼@7¼c.; 1918, February, 19c.

(In barrels)

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.07½	$0.07½	$0.05	$0.05
February	.07½	.07	.05	.05
March	.07	.05	.05	.05
April	.05¼	.05	.05	.05
May	.05¼	.05	.05½	.05½
June	.05¼	.05	.05½	.05½
July	.05¼	.04½	.05½	.05½
August	.05½	.04½	.05½	.05½
September	.05½	.05½	.06	.06
October	.06¾	.06¾	.06	.06
November	.05	.05	.06½	.06½
December	.05	.05	.06½	.06½
Year	.07½	.04½	.06½	.05

Lard Oil, Extra No. 1

On February 15, 1870, the price was 95c.@$1; October 18, 1881, 85@90c.; 1891, 47@50c.; 1901, 52@54c.; 1911, 60@64c.; 1913, 58@59c.; 1918, October, $1.70.

(In barrels)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$1.05	$0.70	$0.72	$0.72
February	.70	.60	.72	.72
March	.70	.70	.72	.72
April	.70	.70	*10.00	*9.50
May	.72	.68	*9.75	*9.25
June	.68	.68	*9.75	*9.75
July	.71	.63	*10.25	*9.75
August	.63	.62	*11.25	*10.25
September	.76	.62	*11.25	*10.25
October	.72	.70	*12.25	*10.25
November	.72	.72	*12.25	*12.25
December	.72	.72	*12.50	*12.50
Year	1.05	.60	*12.50	.72

* Per 100 pounds.

Lard Oil, No. 2

On October 18, 1871, the price was 65@68c.; 1881, 55@62½c.; 1891, 35@37c.; 1901, 41@42c.; 1911, 56@60c.; 1913, 52@53c.; 1918, September, $1.50.

(In barrels)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.80	$0.62	$0.62	$0.62
February	.55	.52	.65	.62
March	.60	.60	.65	.65
April	.60	.60	*9.25	*9.00
May	.62	.60	*9.00	*9.00
June	.62	.62	*9.00	*9.00
July	.62	.53	*9.50	*9.00
August	.56	.55	*9.75	*9.50
September	.61	.56	*9.75	*9.25
October	.60	.56	*11.00	*9.25
November	.60	.60	*11.25	*11.00
December	.62	.60	*11.25	*11.25
Year	.80	.52	11.25	.62

Neatsfoot Oil, Pure

On October 18, 1871, the price was $1@1.10; 1881, 80@90c.; 1891, 60@70c.; 1901, 52@53c.; 1911, 75@80c.; 1913, 64@65c.; 1918, October, $2.50.

(In barrels)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$1.40	$1.30	$1.07	$1.07
February	1.30	.95	1.17	1.07
March	1.00	1.00	1.22	1.22
April	1.00	.82	*18.25	*18.00
May	.82	.75	*18.00	*18.00
June	.80	.80	*18.00	*18.00
July	.80	.78	*18.00	*18.00
August	.81	.78	*18.00	*12.75
September	.81	.81	*12.75	*12.75
October	.90	.83	*13.25	*12.75
November	.83	.83	*13.25	*13.25
December	.83	.83	*13.25	*13.25
Year	1.40	.75	18.25	1.07

Oleo Oil, No. 1

On April 24, 1909, the price was 9@14½c.; October 18, 1911, 9¼@11½c.; 1913, 9@12½c.; 1919, June, 35c.

(In tierces)

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.17½	$0.15½	$0.11	$0.10¼
February	.15	.13½	.11	.10¼
March	.12¾	.12	.11¼	.11¼
April	.12¾	.10¼	.10½	.10
May	.11¾	.10½	*10.75	*10.75
June	.10½	.09	*11.00	*10.75
July	.11	.09	*12.00	*11.00
August	.13¼	.12	*12.00	*11.75
September	.14½	.13¼	*11.75	*11.50
October	.14	.12¾	*11.80	*11.75
November	.12	.12	*13.75	*12.00
December	.11¼	.11¼	*13.75	*13.25
Year	.17½	.09	13.75	.10

* Per 100 pounds.

Oleo Oil, No. 2

On July 29, 1918, the price was 26c.; 1919, June, 33c.

(In tierces)

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.14	$0.11¾	$0.10	$0.08¾
February	.11½	.10¼	.10	.08¾
March	.10¼	.10¼	.10½	.10½
April	.09	.08¾	*10.00	*9.00
May	.09¾	.09	*9.75	*9.75
June	.09¼	.08¼	*10.00	*9.75
July	.09¾	.08¼	*11.00	*10.00
August	.11¾	.10½	*10.75	*10.75
September	.13⅝	.12	*10.75	*10.50
October	.13¼	.12	*10.25	*10.00
November	.11½	.11½	*10.50	*10.25
December	.10½	.10½	*10.50	*10.50
Year	.14	.08¾	11.00	.08¾

* Per 100 pounds.

Red Oil, Distilled

On May 27, 1911, the price was 6½@7½c.; October 18, 1913, 6@6¼c.; 1919, June, 20½c.

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.09	$0.07½	$0.08¼	$0.07¾
February	.08	.07¼	.07¾	.07¾
March	.07¾	.07	.08½	.08½
April	.07¼	.06½	.08½	.08¼
May	.07	.06½	.08½	.08½
June	.07	.07	.08½	.08½
July	.07	.06¾	.08½	.08½
August	.07¾	.06½	.08½	.08¼
September	.07½	.07¼	.08½	.08½
October	.07¼	.07	.09	.08¾
November	.07¼	.07¼	.10	.09½
December	.07¾	.07¼	.10½	.10
Year	.09	.06½	.10½	.07¾

Red Oil, Saponified

On October 18, 1871, the price was 55@57c.; 1881, 60c.; 1891, 5@5¼c.; 1901, 6¼@6½c.; 1911, 7@7½c.; 1913, 6½@7c.; 1919, July, 20½c.

(In barrels)

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.09	$0.07¾	$0.08¾	$0.08
February	.08	.07½	.08	.08
March	.08	.07¼	.08½	.08½
April	.07½	.06¾	.08½	.08½
May	.07¼	.06¾	.08½	.08½
June	.07¼	.07	.08½	.08½
July	.07¼	.07	.08½	.08½
August	.08	.07	.08½	.08½
September	.08	.07¾	.08½	.08½
October	.08	.08	.09	.08¾
November	.08	.08	.10	.09½
December	.08¼	.08	.10½	.10
Year	.09	.06¾	.10½	.08

Sod Oil, Domestic

On October 18, 1871, the price was 75@75c.; 1881, 55@60c.; 1913, 34@35c.; 1919, January, $1.10.

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.70	$0.65	$0.65	$0.65
February	.70	.65	.65	.65
March	.75	.65	.65	.65
April	.75	.65		Nominal
May	.70	.60		Nominal
June	.65	.60		Nominal
July	.65	.60		Nominal
August		Nominal		Nominal
September		Nominal		Nominal
October		Nominal		Nominal
November		Nominal		Nominal
December		Nominal		Nominal
Year	.75	.60	.65	.65

Stearic Acid, Single Pressed

On December 13, 1910, the price was 10@10½c.; October 18, 1901, 11¼@11⅜c.; 1911, 9¼@9½c.; 1913, 8¾@12¼c.; 1919, June, 30c.

(In bags)

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.13½	$0.12¼	$0.09	$0.09
February	.12¼	.11	.09	.09
March	.10½	.10	.09	.09
April	.10	.10	.09	.09
May	.09½	.08¾	.09	.09
June	.09¼	.09	.09	.09
July	.09¼	.09	.09	.09
August	.10	.09	.09	.09
September	.10	.08½	.09	.09
October	.09	.08	.09½	.09¼
November	.09	.09	.10½	.10
December	.09	.09	.11	.10½
Year	.13½	.08	.11	.09

Stearic Acid, Double Pressed

On May 16, 1908, the price was 10@10¼c.; October 18, 1911, 10¼@10½c.; 1919, July, 31½c.

(In bags)

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.14	$0.12¾	$0.09¾	$0.09½
February	.12¾	.11½	.09½	.09½
March	.11	.10½	.09½	.09½
April	.10¾	.10½	.09½	.09½
May	.10¼	.09	.09½	.09½
June	.10	.10	.09½	.09½
July	.10	.09½	.09½	.09½
August	.10½	.09½	.09½	.09½
September	.10½	.09¼	.09½	.09½
October	.09½	.09	.10	.09¾
November	.09¾	.09¾	.11	.10½
December	.09¾	.09¾	.11½	.11
Year	.14	.09	.11½	.09½

Stearic Acid, Triple Pressed

On June 12, 1915, the price was 13@13½c.; 1919, July, 34c.

(In bags)

	Per pound 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.15	$0.13½	$0.10½	$0.10½
February	.14½	.12¾	.10½	.10½
March	.12	.11½	.10½	.10½
April	.11½	.11½	.10½	.10½
May	.11	.10½	.10½	.10½
June	.14	.11	.10½	.10½
July	.14	.10¾	.10½	.10½
August	.11½	.10½	.10½	.10½
September	.11½	.10	.11	.10½
October	.10½	.10½	.12½	.11¼
November	.10½	.10½	.12½	.12
December	.10½	.10½	.13	.12½
Year	.15	.10	.13	.10½

Tallow Oils, Acidless

On October 18, 1871, the price was 77½@80c.; 1881, 75@85c.; 1891, 45@48c.; 1901, 57c.; 1911, 63@65c.; 1913, 62@63c.; 1919, July, $1.90.

(In barrels)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.97	$0.78	$0.75	$0.75
February	.78	.70	.75	.75
March	.75	.70	.75	.75
April	.75	.65	*10.25	10.00
May	.70	.65	*10.00	10.00
June	.65	.65	*10.00	10.00
July	.65	.65	*10.00	10.00
August	.70	.65	*10.50	10.00
September	.82	.70	*10.50	10.25
October	.75	.75	*11.25	10.25
November	.75	.75	*11.75	11.25
December	.75	.75	*12.25	11.75
Year	.97	.65	*12.25	.75

* Per 100 lbs.

Fish Oils

Cod Oil, Domestic Prime

On October 18, 1871, the price was 58@62½c.; 1881, 40@43c.; 1891, 34@36c.; 1901, 30@31c.; 1911, 52@54c.; 1913, 38@40c.; 1918, October, $1.50.

(In barrels)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.60	$0.48	$0.44	$0.42
February	.48	.45	.46	.44
March	.55	.50		Nominal
April	.55	.45		Nominal
May	.42	.42	.55	.55
June	.44	.44	.55	.55
July	.45	.38	.55	.54
August	.44	.40	.54	.54
September	.41	.40	.54	.53
October	.41	.41	.53	.53
November		Nominal	.54	.54
December		Nominal	.55	.55
Year	.60	.38	.55	.42

Cod Oil, Newfoundland

On October 18, 1871, the price was 67½@70c.; 1881, 42½@47c.; 1891, 42@43c.; 1901, 34@35c., 1911, 54@57c.; 1913, 40@42c.; 1918, October, $1.60.

(In barrels)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.65	$0.50	$0.46	$0.45
February	.50	.47	.49	.46
March	.60	.50	.57	.57
April	.60	.48	.60	.60
May	.46	.44	.57	.57
June	.48	.46	.57	.57
July	.47	.43	.57	.55
August	.47	.43	.55	.55
September	.44	.43	.55	.54
October	.42	.42	.55	.54
November	.43	.43	.56	.56
December	.45	.43	.60	.58
Year	.65	.42	.60	.45

Herring Oil, Oriental

On October 31, 1888, the price was 35c.; October 18, 1901, nominal; 1911, 50c.; 1913, nominal; 1918, October, $1.20.

(F.o.b. Pacific coast, sellers' tanks)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.35	$0.30	$0.32	$0.30
February	.35	.30	.33	.32
March	.25	.22½	.35	.35
April	.22½	.20	.35	.35
May	.20	.20	.35	.35
June	.20	.20	.32	.32
July	.20	.20	.32	.32
August	.24	.20	.32	.32
September	.25	.22	.34	.32
October	.25	.25	.34	.34
November	.25	.25	.38	.38
December	.30	.25	.40	.38
Year	.25	.20	.40	.30

Menhaden Oil, Northern, Crude

On October 14, 1879, the price was 30@31c.; October 18, 1881, 32c.; 1891, nominal; 1901, 26c.; 1911, nominal; 1913, nominal; 1918, September, $1.27.

(F.o.b. factory, buyers' tanks)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.32	$0.31		Nominal
February	.35	.32		Nominal
March	.35	.35		Nominal
April	.28	.28		Nominal
May	.30	.27		Nominal
June	.31	.30		Nominal
July	.31	.31		Nominal
August	.25	.25		Nominal
September	.30	.27		Nominal
October	.32½	.29		Nominal
November	.32½	.32½		Nominal
December		Nominal		Nominal
Year	.35	.25		Nominal

Menhaden Oil, Southern, Crude

On December 1, 1886, the price was 18@19c.; October 18, 1901, 25c.; 1911, 35c.; 1913, 35c.; 1918, September, $1.27.

(F.o.b. Baltimore, in barrels)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.34	$0.30	$0.38	$0.35
February	.32	.28	.40	.40
March	.31	.31	.40	.40
April	.30	.25	.40	.40
May	.30	.25	.40	.35
June	.31	.29	.35	.35
July	.30	.28	.42	.35
August	.30	.24	.42	.39
September	.34	.30	.42	.38
October	.33	.29	.40	.37
November	.33	.32	.55	.42½
December	.35	.33	.48	.47
Year	.35	.24	.55	.35

Menhaden Oil, Light Bleached

On October 18, 1871, the price was 41c.; 1881, nominal; 1891, nominal; 1901, 34@35c.; 1911, 50@54c.; 1913, 42@44c.; 1918, November, $1.50.

(In barrels)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.59	$0.53	$0.50	$0.49
February	.53	.52	.55	.52
March	.54	.52	.61	.61
April	.55	.47	.57	.57
May	.50	.41	.55	.54
June	.55	.47	.54	.54
July	.55	.47	.54	.54
August	.51	.46	.54	.54
September	.47	.46	.54	.54
October	.49	.43	.57	.57
November	.49	.49	.68	.64
December	.49	.49	.70	.68
Year	.59	.41	.70	.49

Menhaden Oil, Yellow Bleached

On January 3, 1910, the price was 33@34c.; October 18, 1911, 48@51c.; 1913, 40@42c.; 1918, September, $1.47.

(In barrels)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.57	$0.51	$0.48	$0.47
February	.51	.50	.53	.50
March	.52	.50	.59	.58
April	.52	.45	.59	.59
May	.48	.39	.57	.57
June	.48	.45	.57	.57
July	.49	.45	.57	.57
August	.49	.44	.57	.57
September	.45	.44	.55	.55
October	.47	.42	.55	.55
November	.47	.47	.65	.62
December	.47	.47	.67	.65
Year	.57	.39	.67	.47

Salmon Oil

On July 29, 1918, the price was 90c.; 1919, December, $1.35.

(F.o.b. Pacific coast, sellers' tanks)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.35	$0.30	$0.31	$0.31
February	.35	.30	.33	.33
March	.25	.20	.33	.33
April	.22	.20	.33	.33
May	.22	.20	.33	.33
June	.20	.20	.33	.33
July	.20	.20	.33	.33
August	Nominal		.33	.33
September	.35	.35	.33	.33
October	.35	.30	.33	.33
November	.30	.30	.38	.32
December	.30	.30	.42	.38
Year	.35	.20	.42	.31

Sardine Oil, Oriental

On July 29, 1918, the price was $1.08@1.10; 1918, January, $1.23.

(F.o.b. Pacific coast, sellers' tanks)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.35	$0.30	$0.30	$0.30
February	.30	.30	.33	.33
March	.25	.22½	.33	.33
April	.25	.20	.35	.35
May	.20	.20	.35	.35
June	.20	.20	.35	.35
July	.20	.20	.35	.35
August	.20	.20	.35	.35
September	.25	.20	.35	.35
October	.25	.20	.35	.35
November	.20	.20	.38	.38
December	.20	.20	.40	.38
Year	.35	.20	.40	.30

Sperm, Bleached, 38 Degrees Cold Test

On October 18, 1871, the price was $1.40@1.42½; 1881, $1.10@1.12; 1891, 77@80c.; 1901, 66@68c.; 1911, 74@76c.; 1913, 72@73c.; 1918, April, $2.25.

(In barrels)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$1.80	$1.75	$1.62	$1.62
February	1.75	1.75	1.62	1.62
March	1.75	1.70	1.62	1.62
April	1.70	1.70	1.62	1.62
May	1.70	1.70	1.62	1.62
June	1.70	1.70	1.62	1.62
July	1.70	1.70	1.62	1.62
August	1.70	1.70	1.62	1.62
September	1.70	1.70	1.62	1.62
October	1.70	1.70	1.62	1.62
November	1.70	1.70	.99	.99
December	1.70	1.70	.99	.99
Year	1.80	1.70	1.62	.99

Sperm, Natural, 38 Degrees Cold Test

On October 18, 1871, the price was $1.35@1.37½; 1881, $1.05@1.07; 1891, 72@75c.; 1901, 61@63c.; 1911, 71@73c.; 1913, 69c.; 1918, April, $2.25.

(In barrels)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$1.77	$1.72	$1.60	$1.60
February	1.72	1.72	1.60	1.60
March	1.72	1.67	1.60	1.60
April	1.67	1.67	1.60	1.60
May	1.67	1.67	1.60	1.60
June	1.67	1.67	1.60	1.60
July	1.67	1.67	1.60	1.60
August	1.67	1.67	1.60	1.60
September	1.67	1.67	1.60	1.60
October	1.67	1.67	1.60	1.60
November	1.67	1.67	.96	.96
December	1.67	1.67	.96	.96
Year	1.77	1.67	1.60	.96

Whale Oil, Crude No. 1

On October 18, 1871, the price was 56@57c.; 1881, nominal; 1891, nominal; 1901, nominal; 1911, nominal; 1913, nominal; 1918, August, $1.35.

(F. o. b. Pacific coast, sellers' tanks)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$0.37½	$0.37½	$0.38	$0.38
February	.37½	.37½	.38	.38
March	.37½	.37½	.38	.38
April	.37½	.37½	.38	.38
May	.37½	.37½	.38	.38
June	.40	.30	.38	.38
July	.30	.30	.45	.38
August	.30	.30	.45	.45
September	.35	.30	.45	.45
October	.37½	.37½	.45	.45
November	.37½	.37½	.45	.45
December	.37½	.37½	.45	.45
Year	.40	.30	.45	.38

Whale Oil, Bleached Winter

On October 18, 1871, the price was 65@68c.; 1881, 64c.; 1891, 58@59c.; 1901, 46@48c.; 1911, 52@54c.; 1913, 50@51c.; 1918, January, $1.50.

(In barrels)

	Per gallon 1921. H.	1921. L.	1922. H.	1922. L.
January	$1.00	$0.93	$0.70	$0.70
February	.83	.83	.70	.70
March	.83	.83	.75	.75
April	.83	.65	.75	.75
May	.78	.65	.75	.75
June	.68	.68	.75	.75
July	.73	.67	.75	.75
August	.69	.65	.75	.75
September	.65	.65	.75	.75
October	.70	.65	.75	.75
November	.70	.70	.75	.75
December	.70	.70	.75	.75
Year	1.00	.65	.75	.70

Whale Oil, Natural Winter

On October 18, 1871, the price was 63c.; 1881, 50@51c.; 1891, 56c.; 1901, 44@46c.; 1911, 50@52c.; 1913, 48@49c.; 1918, September, $1.50.

(In barrels)

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.90	$0.90	$0.68	$0.68
February	.78	.78	.68	.68
March	.81	.78	.70	.70
April	.81	.60	.70	.70
May	.76	.69	.70	.70
June	.65	.65	.70	.70
July	.71	.65	.70	.70
August	.60	.60	.70	.70
September	.68	.60	.70	.70
October	.68	.68	.70	.70
November	.68	.68	.70	.70
December	.68	.68	.70	.70
Year	.90	.60	.70	.68

Vegetable Oils

China Wood Oil

On February 4, 1905, the price was 6@6¼c.; October 18, 1911, 8¾@9c.; 1913, 7¼@7½c.; 1918, July, 32c.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.11½	$0.09½	$0.13½	$0.13
February	.10½	.09½	.14¾	.14
March	.10½	.09	.14	.14
April	.10	.08½	.14	.13½
May	.15	.09¾	.14	.13½
June	.15½	.10¾	.14	.13½
July	.15½	.14	.13	.11¾
August	.17	.15	.13	.12¼
September	.17	.12½	.12¾	.12
October	.14½	.13½	.12¾	.12½
November	.15½	.14½	.12¾	.12¾
December	.14½	.13	.13¾	.12½
Year	.17	.08½	.14¾	.11¾

Coconut Oil Meal

On October 7, 1918, the price was $40@42; 1919, October, $66.

	Per short ton			
	1921.		1922.	
	H.	L.	H.	L.
January	$50.00	$42.00	$25.00	$25.00
February	42.00	20.00	25.00	25.00
March	20.00	20.00	25.00	25.00
April	28.00	20.00	26.00	26.00
May	28.00	25.00	25.00	25.00
June	25.00	25.00	25.00	25.00
July	28.00	25.00	25.00	25.00
August	30.00	24.00	33.00	25.00
September	30.00	30.00	33.00	33.00
October	30.00	30.00	33.00	33.00
November	30.00	30.00	33.00	33.00
December	30.00	25.00	41.00	33.00
Year	50.00	20.00	41.00	25.00

Coconut Oil Cake

On October 7, 1918, the price was $39@41; 1919, August, $61.

	Per short ton			
	1921.		1922.	
	H.	L.	H.	L.
January	*$35.00	*$28.00	$24.00	$24.00
February	*28.00	*10.00	24.00	24.00
March	*10.00	*10.00	24.00	24.00
April	*10.00	*10.00	25.00	25.00
May	*10.00	*10.00	24.00	24.00
June	*10.00	*10.00	24.00	24.00
July	*10.00	*10.00	24.00	24.00
August	*10.00	*16.00	35.00	24.00
September	*16.00	*16.00	32.00	32.00
October	16.00	16.00	32.00	32.00
November	16.00	16.00	32.00	32.00
December	16.00	16.00	40.00	32.00
Year	35.00	10.00	40.00	24.00

* F. o. b. Pacific coast.

Coconut Oil, Manila

On October 23, 1918, the price was 15¾@16c.; 1919, July, 20¾c.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.12	$0.11¾	$0.09	$0.09
February	.12	.09	.09	.09
March	.09¾	.08¾	.09	.09
April	.09¾	.08¾	.09	.09
May	.10½	.09½	.08¾	.08½
June	.10¼	.10¼	.08½	.08½
July	.10¼	.10¼	.08½	.08½
August	.10½	.09½	.08¼	.08¼
September	.10	.10	.08¼	.08¼
October	.10	.08	.08¼	.08¼
November	.09½	.07½	.08½	.08½
December	.07⅞	.07½	.08¾	.08½
Year	.12	.07½	.09	.08¼

Coconut Oil, Edible

On August 19, 1918, the price was 20@21c.; 1919, July, 24c.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.17	$0.14	$0.10½	$0.10½
February	.14	.12	.10½	.10½
March	.12	.11	.10½	.10½
April	.11¼	.10	.10¾	.10¾
May	.12½	.11	.10¾	.10½
June	.12½	.12	.10¼	.10½
July	.12	.12	.10½	.09¾
August	.12¾	.11⅞	.09¾	.09¾
September	.12	.12	.09¾	.09¾
October	.12	.12	.09¾	.09¾
November	.11½	.11½	.10¼	.09¾
December	.11	.11	.10⅜	.10¼
Year	.17	.10	.10¾	.09¾

Coconut Oil, Cochin, Domestic

On September 18, 1916, the price was 14@15c.; 1919, June, 22c.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.13½	$0.12½	$0.10	$0.09¼
February	.13	.10¼	.09⅞	.09¾
March	.10¾	.09¾	.10	.10
April	.10¼	.09½	.09¾	.09¾
May	.12	.10¼	.09½	.09½
June	.12	.10½	.09½	.09¼
July	.10½	.10½	.09½	.09¼
August	.11½	.11	.09¼	.09¼
September	.11	.11	.09¼	.09¼
October	.11	.10½	.09	.09
November	.10½	.10	.09½	.09
December	.10	.10	.10	.09½
Year	.13½	.09½	.10	.09

Coconut Oil, Ceylon, Domestic

On August 14, 1916, the price was 12¾@13c.; 1919, July, 20¾c.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.12	$0.11¾	$0.09	$0.09
February	.12	.09¾	.09	.08½
March	.09	.08¾	.09¼	.09¼
April	.09¾	.08¾	.08¾	.08¾
May	.10½	.09½	.08⅝	.08⅝
June	.10¾	.10¾	.08⅝	.08⅝
July	.10¾	.10¾	.08⅝	.08½
August	.10½	.09½	.08½	.08½
September	.10	.10	.08½	.08¼
October	.10	.09¾	.08½	.08¼
November	.09½	.09½	.08¾	.08½
December	.09½	.09¼	.09⅛	.08¾
Year	.12	.08¾	.09¼	.08¼

Copra, South Sea Islands

On April 20, 1912, the price was 9⅛@9¼c.; 1913, 10⅜@10⅝c.; 1919, January, 20¾c.

(New York, in bags)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.06¼	$0.05¼	$0.04½	$0.04½
February	.06	.04	.04½	.04⅜
March	.05	.04	.04⅞	.04⅞
April	.04¾	.04½	.04½	.04½
May	.05¾	.04½	.04⅜	.04⅜
June	.05	.05	.04⅝	.04½
July	.04¾	.04½	.04½	.04½
August	.04¾	.04½	.04½	.04½
September	.05	.05	.04½	.04⅜
October	.05	.04⅜	.04⅜	.04⅜
November	.04¼	.04¼	.04⅜	.04⅜
December	.04⅝	.04¼	.04⅜	.04⅜
Year	.06¼	.04	.04⅞	.04⅝

Copra

On January 5, 1918, the price was 8⅞@9c.; 1920, January, 11¼c.

(F.o.b. Pacific coast, bags)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.05½	$0.05	$0.04¼	$0.04⅛
February	.05½	.04	.04⅛	.04
March	.04½	.04	.04½	.04¼
April	.04¼	.04	.04¼	.04¼
May	.05¼	.04¼	.04¼	.04¼
June	.04¼	.04¼	.04⅜	.04¼
July	.04¼	.04⅛	.04⅜	.04¼
August	.04½	.04⅛	.04⅜	.04⅜
September	.04½	.04⅜	.04¼	.04⅛
October	.04½	.04¼	.04⅜	.04⅜
November	.04¼	.04¼	.04⅜	.04⅜
December	.04⅜	.04¼	.04⅝	.04⅜
Year	.05½	.04	.04⅝	.04

Corn Oil, Crude

On March 8, 1915, the price was $7.75@7.85; 1920, January, $20.81.

(In barrels)

	Per hundredweight			
	1921.		1922.	
	H.	L.	H.	L.
January	$9.01	$8.61	$8.76	$8.38
February	8.75	8.00	8.50	8.74
March	8.10	7.80	11.24	11.24
April	7.80	7.76	11.50	11.25
May	8.01	7.51	11.25	11.25
June	7.76	7.76	11.49	10.99
July	7.88½	7.38½	10.55	9.68½
August	9.00	7.88½	9.67	9.67
September	10.38½	8.50	9.67	8.42
October	10.25	8.75	9.17	8.92
November	9.25	8.75	10.05	9.42
December	8.75	8.63½	10.67	10.05
Year	10.38½	7.38½	11.50	8.38

Corn Oil, Refined

(In cooperage)

On August 5, 1895, the price was $32@33; October 18, 1913, $6.25@6.35; 1919, August, $28.56.

	Per hundredweight			
	1921.		1922.	
	H.	L.	H.	L.
January	$12.26	$10.76	$10.24	$10.24
February	10.76	10.50	11.24	9.78
March	10.50	9.50	12.49	12.49
April	9.76	9.50	12.99	12.99
May	9.26	9.26	12.99	12.99
June	9.26	9.26	12.99	12.49
July	9.26	9.10	12.42	12.42
August	10.26	10.00	11.42	11.42
September	11.26	10.26	11.42	10.42
October	11.50	10.00	10.92	10.42
November	11.00	10.37½	11.42	10.92
December	10.75	10.12½	12.17	11.42
Year	12.26	9.10	12.99	9.78

Corn Oil Meal

On March 15, 1897, the price was $13@13.50; October 18, 1901, $22.50; 1911, nominal; 1913, nominal; 1920, June, $78.46.

	Per short ton			
	1921.		1922.	
	H.	L.	H.	L.
January	$53.12	$53.12	$41.70	$41.00
February	53.12	41.12	37.65	36.00
March	41.12	30.00	37.50	37.50
April	37.12½	30.00	37.50	37.50
May	37.12½	30.00	37.50	37.50
June	37.12½	30.00	37.50	36.50
July	37.12½	30.00	37.50	36.50
August	30.00	30.00	36.50	36.50
September	34.62	30.00	36.50	36.50
October	34.62	33.70	36.50	36.50
November	31.69	31.69	36.50	36.50
December	41.70	31.69	45.50	36.50
Year	53.12	30.00	45.50	36.00

Cottonseed Oil, Prime Summer Yellow

On October 18, 1871, the price was 53@56c. per gallon; in 1881, 56@57½c. per gallon; 1891, 34@35c. per gallon; 1901, 38@40c. per gallon; 1911, 6.00@6.12½c. per pound; 1913, 6.85@6.90c.; 1919, July, 27.50c.

(In barrels)

	Cents per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	8.40	8.00	8.60	8.20
February	8.40	6.60	9.40	9.40
March	7.00	6.40	11.75	11.75
April	6.00	5.50	11.65	11.00
May	7.30	6.90	11.50	11.50
June	7.65	7.00	11.00	11.00
July	8.75	7.50	11.15	10.60
August	8.75	8.30	10.60	10.60
September	10.00	8.50	9.00	8.20
October	9.90	8.25	8.50	8.35
November	8.40	8.40	10.50	9.50
December	8.40	8.20	11.25	10.50
Year	10.00	5.50	11.75	8.20

Cottonseed Oil, Prime Crude, f. o. b. Southeast

On October 18, 1871, the price was 44@46c. per gallon; 1881, 45@50c.; 1891, 30@31c.; 1901, 30@31c.; 1911, 33c.; 1913, 43@43½c. per gallon; 1919, June, 22.50c. per pound.

	Cents per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	6.25	6.00	7.15	7.00
February	6.25	5.65	8.50	8.05
March	5.60	4.55	10.25	10.25
April	4.65	4.00	10.00	9.75
May	5.50	5.00	10.00	10.00
June	6.00	5.60	9.75	9.75
July	7.25	6.00	8.75	8.75
August	7.25	6.25	8.50	8.50
September	8.25	7.25	6.80	6.25
October	8.00	7.00	7.25	6.25
November	7.00	7.00	8.50	8.00
December	7.00	7.00	9.12½	8.50
Year	8.25	4.00	10.25	6.25

Lumbang Oil

On September 2, 1918, the price was $1.75; 1919, July, $1.75.

(In barrels)

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.12½	$0.12½	$0.09	$0.09
February	.12½	.12½	.09	.07½
March	.12½	.12½	.09	.09
April	.12½	.10	.10½	.10½
May	.10	.08	.10½	.10½
June	.08	.08	Nominal	
July	.08	.08	Nominal	
August	.08	.08	Nominal	
September	.10	.08	Nominal	
October	.10	.10	Nominal	
November	.09	.09	Nominal	
December	.09	.09	Nominal	
Year	.12½	.08	Nominal	

Linseed Oil

On October 18, 1871, the price was 81@82c.; 1881, 59@60c.; 1891, 40c.; 1901, 65@66c.; 1911, 88@89c.; 1913, 46c.; 1919, July, $2.22.

(Carload lots)

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.80	$0.74	$0.69	$0.64
February	.70	.62	.86	.71
March	.67	.65	.84	.84
April	.67	.55	.79	.79
May	.75	.60	.90	.90
June	.76	.73	.87	.82
July	.80	.71	.89	.80
August	.77	.73	.87	.86
September	.77	.73	.88	.86
October	.70	.67	.90	.87
November	.69	.65	.87	.85
December	.69	.67	.90	.86
Year	.80	.55	.90	.64

Olive Oil, Denatured

On October 18, 1871, the price was $1.22@1.25; 1881, $1@1.10; 1891, 62@65c.; 1901, 58@62c.; 1911, 85@89c.; 1913, 83@85c.; 1919, January, $3.50.

(In barrels)

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$2.60	$2.60	$1.10	$1.10
February	2.50	1.80	1.10	1.10
March	2.00	1.70	1.12	1.12
April	1.70	1.45	1.15	1.12
May	1.40	1.35	1.15	1.15
June	1.45	1.45	1.15	1.15
July	1.45	1.35	1.15	1.15
August	1.20	1.15	1.15	1.15
September	1.15	1.00	1.15	1.15
October	1.10	1.00	1.15	1.15
November	1.15	1.15	1.15	1.15
December	1.15	1.10	1.15	1.15
Year	2.60	1.00	1.15	1.10

Olive Oil, Prime Foots

On May 13, 1879, the price was 8½c.; October 18, 1881, 7½c.; 1891, 5¼@5½c.; 1901, 5@5¼c.; 1911, 7¼@7½c.; 1913, 7¾@8c.; 1918, May, 45c.

(In casks)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.12½	$0.09	$0.08½	$0.08
February	.10	.09½	.08½	.08
March	.11	.10	.09	.08¾
April	.10½	.08½	.09	.09
May	.08¾	.07½	.09	.09
June	.08¾	.08½	.08½	.08½
July	.07½	.07½	.08¼	.08¼
August	.07½	.07½	.08¾	.08¼
September	.08	.07¾	.09	.08¾
October	.08¼	.08	.09½	.08½
November	.08¾	.08¾	.09½	.09¼
December	.08¾	.08½	.09¼	.09
Year	.12½	.07½	.09½	.08

Olive Oil, Edible

On January 19, 1918, the price was $3@3.25; 1918, November, $7.50.

(In barrels)

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$3.50	$2.60	$1.85	$1.80
February	3.00	2.20	1.80	1.80
March	2.50	1.80	1.80	1.80
April	2.25	1.60	1.80	1.80
May	2.25	1.60	2.00	2.00
June	2.60	1.95	2.00	1.85
July	2.25	1.95	1.85	1.85
August	2.25	1.50	1.75	1.75
September	1.75	1.50	1.75	1.75
October	1.85	1.65	1.75	1.75
November	1.85	1.85	1.75	1.75
December	2.00	1.85	1.65	1.65
Year	3.50	1.50	2.00	1.65

Palm Oil, Lagos

On October 18, 1871, the price was 8@8¾c.; 1881, 7¼@7½c.; 1891, 6@6½c.; 1901, 5½@5¾c.; 1911, nominal; 1913, 7⅝@7¾c.; 1918, May, 40c.

(In casks)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.07¾	$0.07½	$0.07⅞	$0.07¾
February	.07¾	.06½	.08	.07¾
March	.07	.06½	.08¼	.08¼
April	.06½	.06½	.08	.07¾
May	.07	.06¾	.07¼	.07¼
June	.06½	.06½	.07	.07
July	.06½	.06½	.07⅛	.07
August	.08	.06	.07	.07
September	.07½	.07	.06⅞	.06¾
October	.07½	.07	.06⅞	.06⅞
November	.06¾	.06¾	.07¼	.07¼
December	.07⅞	.06¾	.07⅞	.07¼
Year	.08	.06	.08¼	.06¾

Palm Kernel Oil

On February 26, 1910, the price was 8⅜@8¼c.; October 18, 1911, 9¼c.; 1913, 10½@10¾c.; October, 1919, 22c.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.12	$0.10	$0.08¾	$0.08½
February	.10¼	.10	.08¾	.08¼
March	.09½	.09½	.08¾	.08¾
April	.09½	.09	.08¾	.08¾
May	.10	.09¼	.08¾	.08¾
June	.09½	.09½	.09	.08¾
July	.09½	.08	.09	.08¾
August	.09½	.08½	.08¾	.08¾
September	.09¾	.09¼	.08¾	.08½
October	.09¼	.09¼	.08½	.08
November	.09¼	.09¼	.08	.07⅞
December	.09½	.08½	.08½	.08
Year	.12	.08	.09	.07⅞

Peanut Oil, Crude

On November 13, 1909, the price was 8c.; October 18, 1911, 7@7¼c.; 1913, 6½@7½c.; 1919, November, $1.80.

(F. o. b. mills, in buyers' tanks)

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.07¼	$0.06¾	$0.09½	$0.09¼
February	.06¾	.06	.09¾	.09¼
March	.06	.06	.11	.09¾
April	.06	.05½	.11¾	.11
May	.06¼	.05½	.12	.12
June	.06¼	.06	.12	.12
July	.06¼	.06	.12	.12
August	.07⅜	.07¼	.12	.11¾
September	.08	.07½	.11¾	.11¾
October	.08¾	.08	.11	.11
November	.07¾	.07¾	.11¾	.11
December	.08	.07¾	.12	.11¾
Year	.08¾	.05½	.12	.09¼

Peanut Oil, Domestic, Refined

On August 5, 1916, the price was 12½@14c.; 1919, January, 21c.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.13	$0.12	$0.11½	$0.10¾
February	.13	.12	.11¾	.10¾
March	.11	.11	.12¼	.11¾
April	.11	.10	.13½	.12½
May	.10½	.10½	.13	.13
June	.10½	.10	.13	.13
July	.10	.10	.13	.12
August	.10½	.10	.12½	.12½
September	.11½	.10	.12½	.12
October	.11½	.10	.12	.12
November	.11	.11	.13	.12
December	.11	.11	.15	.14
Year	.13	.10	.15	.10¾

Peanut Oil, Oriental

On May 20, 1918, the price was 18½c.; 1919, August, 26½c.

(F. o. b. Pacific coast, sellers' tanks.)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.08	$0.07	$0.08	$0.08
February	.07¼	.06	.09	.08
March	.06¾	.06	.10¼	.10
April	.06½	.06	Nominal	
May	.06¾	.06¼	Nominal	
June	.06¼	.05¾	Nominal	
July	.06	.06	Nominal	
August	.07½	.07	Nominal	
September	.08	.07¾	Nominal	
October	.08	.08	Nominal	
November	.08	.08	Nominal	
December	.08	.08	.08¼	.08¼
Year	.08	.05¾	.10¼	.08

Peanut Oil Meal, 20 Per Cent.

On November 18, 1918, the price was $45; 1919, December, $80.

	Per short ton			
	1921.		1922.	
	H.	L.	H.	L.
January	Nominal		$22.50	$20.00
February	Nominal		20.00	20.00
March	Nominal		20.00	20.00
April	Nominal		20.00	20.00
May	Nominal		20.00	20.00
June	*$40.00	...	20.00	20.00
July	*40.00	...	25.00	20.00
August	*40.00	...	27.00	25.00
September	30.00	29.00	27.00	27.00
October	30.00	30.00	28.00	27.00
November	30.00	30.00	28.60	28.00
December	30.00	22.50	28.00	28.00
Year	40.00	22.50	28.60	20.00

* 40 per cent.

Perilla Oil

On August 5, 1918, the price was 19c.; 1919, August, 26c.

(F. o. b. Pacific coast, sellers' tanks.)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.09¼	$0.07½	$0.12	$0.10½
February	.07½	.07¼	.12	.10½
March	.06¾	.06¼	.12	.10½
April	.06¼	.06¼	Nominal	
May	.07	.06¼	.13	.13
June	.07	.07	.13½	.13½
July	.07	.07	.13½	.13½
August	.09½	.09	.13½	.13¼
September	.07½	.07½	.13½	.13¼
October	.08½	.08½	Nominal	
November	.08½	.08¼	.13	.12
December	Nominal		.13½	.13
Year	.09½	.06¼	.13½	.10½

Poppy Seed Oil

(In barrels)

On September 2, 1918, the price was $5; 1918, January, $5.

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$3.20	$3.20	$2.50	$2.50
February	3.20	3.20	2.50	2.50
March	3.00	3.00	2.50	2.50
April	3.00	3.00	2.50	2.50
May	3.00	3.00	2.50	2.50
June	3.00	3.00	2.50	2.50
July	3.00	3.00	2.50	2.50
August	3.00	3.00	2.50	2.50
September	2.50	2.50	2.50	2.50
October	2.50	2.50	2.50	2.50
November	2.50	2.50	2.50	2.50
December	2.50	2.50	2.50	2.50
Year	3.20	2.50	2.50	2.50

Rapseed Oil, Blown

On May 12, 1902, the price was 67@68c.; October 18, 1901, 66½@67c.; 1911, 72@75c.; 1913, 67@68c.; 1918, September, $2.

(In barrels)

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.35	$1.14	$0.95	$0.93
February	1.14	1.14	.93	.90
March	1.14	1.14	.92	.92
April	1.14	.86	.92	.92
May	1.00	.86	.86	.86
June	.90	.90	.92	.92
July	1.05	.90	.95	.92
August	1.10	.95	.95	.95
September	.95	.90	.90	.90
October	.95	.95	.90	.90
November	.95	.95	.92	.92
December	.95	.95	.92	.92
Year	1.35	.86	.95	.86

Rapeseed Oil, Refined

On October 18, 1871, the price was $1.15@1.30; 1881, 85c.@$1; 1891, 67½@70c.; 1901, 68@72c.; 1911, 69@72c.; 1913, 63@64c.; 1918, October, $1.92.

(In barrels)

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.12	$1.05	$0.84	$0.82
February	1.05	1.05	.86	.82
March	1.05	1.05	.86	.84
April	1.05	.86	.84	.83
May	.90	.85	.83	.83
June	.85	.85	.84	.84
July	.92	.85	.84	.84
August	.95	.85	.83	.83
September	.90	.90	.83	.79
October	.87	.86	.79	.78
November	.86	.83	.78	.78
December	.83	.83	.83	.78
Year	1.12	.83	.86	.78

Sesame Oil, Edible

On December 7, 1873, the price was $1.15@1.20; October 18, 1881, $1@1.10; 1891, 72@75c.; 1901, 67@70c.; 1911, 75@85c.; 1918, November, $4.

(In barrels)

	Per gallon			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.30	$0.22	$1.15	$1.15
February	.22	.22	1.15	1.15
March	.22	.22	1.15	1.15
April	.22	.22	1.15	1.10
May	.20	.20	1.10	1.10
June	.20	.20	1.10	1.10
July	.20	.20	1.10	1.10
August	.20	.20	1.10	1.10
September	.18	.18	Nominal	
October	.18	.18	Nominal	
November	.18	.17	1.25	1.25
December	.17	.17	1.25	1.25
Year	.30	.17	1.25	1.10

Soya Bean Oil

On December 18, 1909, the price was 6½@6¾c.; October 18, 1911, 7½@7¾c.; 1913, 6¾@6½c.; 1918, July, 20½c.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.09½	$0.08	$0.08⅝	$0.08¾
February	.07¼	.06	.09¼	.08¾
March	.06¾	.06¼	.11	.10¼
April	.07	.07	.11¼	.11¼
May	.08	.07	Nominal	
June	.08	.07⅝	Nominal	
July	.08½	.07⅝	Nominal	
August	.09	.08¼	Nominal	
September	.08¾	.08	Nominal	
October	.09½	.09	Nominal	
November	.08¾	.08¾	.16½	.10
December	.09	.09	.11	.10
Year	.09½	.06	.11¼	.08¾

Tallow, Vegetable, 51 Titre

On December 9, 1918, the price was 16c.; 1919, June, 22c.

C. i. f. Pacific Coast, in barrels.)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	Nominal		$0.08	$0.07½
February	$0.07½	$0.07½	.07¾	.07½
March	.07¼	.07¼	.07¼	.07¼
April	.07¼	.07¼	.07¼	.07¼
May	.07¼	.07¼	.07¼	.07¼
June	.06⅝	.06⅝	.07½	.07¼
July	.06⅝	.06⅝	Nominal	
August	.06⅝	.06⅝	Nominal	
September	.06⅝	.06⅝	Nominal	
October	.06⅝	.06⅝	Nominal	
November	.08	.06⅝	.07½	.07
December	.08	.08	.07¾	.07½
Year	.08	.06⅝	.08	.07¼

Tea Oil

On August 5, 1918, the price was 24@25c.; 1918, September, $3.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.24	$0.20	.12	.12
February	.20	.20	.12	.12
March	.20	.20	.12	.12
April	.20	.20	.12	.12
May	.20	.20	.12	.12
June	.20	.20	.12	.12
July	*.11¼	*.11¼	.12	.12
August	.15	.15	.12	.12
September	.15	.15	.12	.12
October	.15	.15	.12	.12
November	.15	.15	.11	.11
December	.15	.11½	.11	.11
Year	.24	.11¼	.12	.11

*Sellers' tanks.

Fatty Acids, Coconut

On October 7, 1918, the price was 15c.; 1919, July, 17¾c.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.06½	$0.06	$0.07½	$0.06⅜
February	.06	.05¾	.08	.07¼
March	.05¾	.04½	.08	.08
April	.06	.04¾	.08	.08
May	.06½	.05¾	.08¼	.08¼
June	.06½	.06½	.08½	.08½
July	.06½	.06¼	.08½	.08½
August	.06½	.06	.08½	.08½
September	.06½	.06½	.08½	.08½
October	.06½	.06½	.08½	.08½
November	.06½	.06½	.08¼	.08¼
December	.06½	.06½	.08¾	.08¼
Year	.06½	.04½	.08¾	.06⅜

Fatty Acids, Soya Bean

On October 7, 1918, the price was 15@15½c.; 1919, August, 18½c.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.06	$0.06	$0.08¼	$0.08½
February	.06	.05¾	.08¾	.08
March	.05⅝	.05	.08½	.08¼
April	.06	.06	.08½	.08½
May	.06¼	.06	.09	.09
June	.07¼	.06¼	.09	.09
July	.07¼	.07¼	.09	.09
August	.07¼	.07¼	.09	.09
September	.07¼	.07¼	.09	.09
October	.07¼	.07¼	.10	.09
November	.07¼	.07¼	.10¾	.10⅛
December	.07¼	.07¼	.10¾	.10⅜
Year	.07¼	.05	.10¾	.08

Greases, Lard, Stearins and Tallow

Grease, Brown

On March 4, 1907, the price was 5½@5¾c.; October 18, 1911, 5¼@5¾c.; 1913, 4¼@5¼c.; 1918, June, 16¼c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.04¾	$0.04	$0.04¾	$0.04¾
February	.04½	.03½	.05	.05
March	.04	.02½	.06	.05
April	.02¾	.02½	.05	.05
May	.03	.02½	.05	.05
June	.03	.02¼	.05	.05
July	.03¼	.02¼	.05	.05
August	.04½	.02½	.05½	.05
September	.03¾	.03½	.05½	.05
October	.04	.03¾	.06	.05½
November	.04½	.04½	.06¾	.06½
December	.04¾	.04¾	.06¾	.06½
Year	.04¾	.02¼	.06¾	.04¾

Grease, House

On November 16, 1901, the price was 5¼@5½c.; October 18, 1911, 5¾@6¼c.; 1913, 5¼@5¾c.; 1919, July, 16½c.

(In drums)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.05½	$0.04½	$0.04¾	$0.04¾
February	.04¾	.04½	.04¾	.04¾
March	.05	.04	.06¼	.05¼
April	.04	.03½	.05¼	.05¼
May	.04¼	.03½	.05¼	.05¼
June	.04	.03¼	.05¼	.05¾
July	.03½	.03¼	.05¼	.05¼
August	.04⅝	.03¼	.05¾	.05½
September	.05¼	.04½	.05¾	.05¾
October	.05¼	.04½	.06¼	.05¾
November	.04½	.04½	.06½	.06¼
December	.04¾	.04¼	.06¾	.06¼
Year	.05½	.03¼	.06¾	.04¾

Lard, City Steamed

On February 18, 1874, the price was 9¾c. per pound; October 18, 1881, 12c.; 1891, 6.30@6.50c.; 1901, 9.20@9.30c.; 1911, 8¾c.; 1913, 10½c.; 1919, June, 35½c.

(In drums)

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$13.00	$12.75	$9.50	$9.50
February	13.00	11.50	11.75	9.50
March	11.75	11.35	12.50	11.40
April	11.25	9.75	10.75	10.75
May	9.50	8.75	11.75	11.25
June	10.25	9.00	12.00	11.75
July	12.25	10.50	12.00	11.25
August	12.25	10.75	11.50	11.25
September	11.75	10.75	11.00	10.75
October	9.75	9.00	12.00	11.75
November	9.75	9.50	11.75	11.50
December	9.50	9.50	12.50	11.40
Year	13.00	8.75	12.50	9.50

Lard, Compound

On February 8, 1897, the price was 4@4¾c. per pound; October 18, 1901, 8@8½c.; 1911, 7½@7¾c.; 1913, 8¾@8¾c.; 1919, July, 30c.

(In drums)

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$11.75	$11.00	$10.50	$10.00
February	11.00	10.25	12.50	10.75
March	10.25	9.25	13.75	13.25
April	9.00	8.00	13.00	13.00
May	9.00	8.50	13.00	13.00
June	9.25	9.25	13.00	13.00
July	11.25	9.25	13.00	12.00
August	11.25	10.75	12.00	11.50
September	12.25	11.00	11.25	11.00
October	12.25	11.25	11.00	11.00
November	10.75	10.25	11.25	11.00
December	10.25	10.00	12.00	11.50
Year	12.25	8.00	13.75	10.00

Lard, Middle Western

On April 29, 1907, the price was 9.10c. per pound; October 18, 1911, 9.40c.; 1913, 10¾@10⅞c.; 1919, June, 36¼c.

(In carload lots)

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$13.75	$13.50	$10.25	$10.00
February	13.50	11.75	12.50	10.25
March	12.25	11.37½	12.85	11.60
April	11.50	9.35	11.60	11.00
May	10.30	9.50	11.75	11.75
June	10.75	9.50	12.25	12.10
July	12.75	11.00	12.25	11.60
August	12.65	11.00	11.85	11.50
September	12.50	11.25	11.40	10.90
October	10.10	9.75	12.00	11.90
November	10.25	10.00	11.90	11.60
December	10.00	10.00	12.40	11.40
Year	13.75	9.35	12.65	10.00

Lard, Neutral

On February 8, 1897, the price was 5@5¾c. per pound; October 18, 1901, 12¼@12½c.; 1911, 10⅞c.; 1913, 11¾@12c.; 1919, June, 37½c.

(In drums)

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$17.50	$16.50	$10.75	$10.75
February	16.00	14.50	13.50	11.00
March	14.50	14.50	13.75	12.50
April	14.50	12.50	12.25	12.25
May	12.25	12.25	12.75	12.75
June	12.50	11.75	13.50	13.25
July	13.50	12.00	13.50	13.50
August	15.00	14.00	13.50	13.50
September	15.00	14.00	13.25	13.00
October	14.00	13.00	14.00	13.00
November	13.75	11.50	14.50	14.00
December	11.50	10.75	15.75	14.00
Year	17.50	10.75	15.75	10.75

Stearin, Lard

On November 23, 1896, the price was 5@5¼c.; October 18, 1901, 10½@10¾c.; 1911, 10½@11c.; 1913, 12@12¼c.; 1919, July, 41c.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.16	$0.16	$0.12¾	$0.12¾
February	.16	.15	.13	.12½
March	.15	.13½	Nominal	
April	.15	.13½	Nominal	
May	.13	.13	.14	.14
June	.12	.12	.14¼	.14¼
July	.15	.12	.14¼	.14¼
August	.15½	.15	.14¼	.14¼
September	.15	.14½	.14¼	.14¼
October	.14	.13	.13½	.13½
November	.12¾	.12¾	.12¾	.12¾
December	.12¾	.12¾	.12¾	.12¾
Year	.16	.12	.14¼	.12½

Stearin, Oleo

On January 4, 1893, the price was 6¼@6½c.; October 18, 1901, 11½@11¾c.; 1911, 10¼c.; 1913, 8½@8¾c.; 1919, July, 41c.

(In barrels)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.10¾	$0.08	$0.08	$0.08
February	.08¼	.07½	.10	.08
March	.07½	.07¼	.10½	.10
April	.07	.06½	.10	.08¾
May	.08	.07½	.09¼	.08¾
June	.07½	.07½	.09½	.09¼
July	.11	.07	.10⅜	.09⅝
August	.11½	.10¾	.09⅝	.09⅜
September	.11	.10¾	.09⅝	.09
October	.10¾	.09¾	.10⅝	.09
November	.09½	.07¼	.12	.10¾
December	.08	.07¼	.10	.10
Year	.11½	.06½	.12	.08

Tallow, City Prime, Loose

On November 11, 1879, the price was 7⅛@7⅜c.; October 18, 1881, 8¼c.; 1891, 4⅞c.; 1901, 5⅜@6c.; 1911, 6¾c.; 1913, 6⅝c.; 1919, October, 16½c.

(In drums)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.05½	$0.04¾	$0.05	$0.05
February	.05¼	.04¾	.05½	.05
March	.04¾	.04¼	.06	.05¾
April	.04¼	.04	.05½	.05½
May	.04¼	.04	.05½	.05½
June	.04¼	.03⅝	.05½	.05½
July	.03⅝	.03⅜	.05½	.05⅝
August	.05	.03⅝	.05⅝	.05⅝
September	.05¼	.05¼	.06½	.05⅝
October	.05⅜	.04½	.06	.05½
November	.04½	.04½	.06⅝	.06
December	.05	.04½	.07⅜	.06¾
Year	.05⅝	.03⅜	.07⅜	.05

Tallow, City Special, Loose

On August 26, 1911, the price was 7@7¼c.; October 18, 1911, 7⅛@7⅜c.; 1913, 6⅝c.; 1919, July, 21c.

(In drums)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.06½	$0.06	$0.06	$0.06
February	.06	.05½	.06⅜	.06
March	.05½	.05¼	.07	.06½
April	.05¼	.05	.06½	.06¼
May	.05¼	.05	.06¾	.06¾
June	.05	.04¾	.06½	.06½
July	.04½	.04½	.06½	.06¾
August	.06	.04¾	.06⅜	.06⅜
September	.06¾	.06¼	.06¾	.06½
October	.06⅜	.06	.06¾	.06¾
November	.06	.06	.07¾	.07¾
December	.06	.05¾	.08	.07¼
Year	.06¾	.04½	.08	.06

Tallow, Edible

On December 22, 1906, the price was 7¼c.; October 18, 1911, 7⅝@8c.; 1913, 8@8½c.; 1919, July, 27c.

(In drums)

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.08	$0.08	$0.08	$0.08
February	.08	.08	.08½	.08
March	.06½	.06	.08½	.08½
April	.06	.06	.08½	.08½
May	.07¼	.06	.08½	.08½
June	.06½	.06	.08	.08
July	.06½	.06	.08	.08
August	.08¾	.06	.07¾	.07¾
September	.08	.07½	.07¾	.07¾
October	.08	.07½	.08½	.07¾
November	.07½	.07½	.09½	.08¾
December	.08	.08	.09½	.09
Year	.08¾	.06	.09½	.07¾

Necrological Record of 1922

The following list comprises the names of persons connected with the various industries, in the field of the Oil, Paint and Drug Reporter, who died during 1922. Age, date of death, line of business, and the date of publication of the obituary notice are also given:—

Adams, C. M., 79; petroleum.....May 8
Allen, William C., 78; September 24; chemicals.....Oct. 2
Alsfasser, John J., 56; June 5; paint..June 12
Andrews, James N., 54; June 5; fertilizers.....June 12
Andrews, Robert F., 60; November 2; paint.....Nov. 13
Andrus, William Loyal, 99; March 3; chemicals.....Mar. 13
Antram, Harry A., 58; September 2; containers.....Sept. 18
Amend, Adolph B., 75; April 19; drugs.April 24
Arnold, Frank R., April 1; druggists' sundries.....April 10

Ballard, Roy T., 51; January 7; drugs.Jan. 23
Barstow, William A., 45; February 10; tank cars.....Feb. 13
Baskerville, Dr. Charles, 51; January 28; chemist.....Feb. 6
Baumer, Edmund, 41; May 1; candles..May 8
Bernstein, Charles, 75; June 10; chamois and sponges.....June 19
Bichels, Emil; October 28; crude drugs.Nov. 6
Blood, Thomas L., 65; January 5; paints.....Jan. 9
Bond, John B., 54; March 24; drugs...April 3
Brandeis, Rudolph, 82; December 29; shellac and tanning materials.....Jan. 2
Britt, Adolph, 66; May 20; chemicals..May 29
Bruce, James Eagen; June 1; chemicals.June 5
Burroughs, James S., 84; June 2; chemicals and oils.....June 12
Bush, Edwin Arnold, 46; November 14; glues and sizes.....Nov. 27

Camp, Harry, 39; February 1; glass...Feb. 6
Chambers, James Albert, 73; February 25; glass.....March 13
Chandler, George Perry, 79; January 15; drugs.....Jan. 23
Chandler, Mrs. Walker, August 7; daughter of G. W. Fortmeyer.....Aug. 14
Collins, Frank P., 64; September 28; paint.....Oct. 9
Curtis, R. J., August 30; petroleum...Sept. 4

Dancy, Frank Battle, 62; July 1; fertilizers.....July 10
Diehl, Charles F., 51; January 6; salt..Jan. 23
Dinkelspiel, Paul; March 4; fertilizers..Mar. 13
DuBois, Jean, 53; chemicals.....Jan. 30

Eardley, Frank, 57; July 6; chemicals..July 10
Eward, John J., 74; June 14; chemicals and flaxseed.....June 19
Egan, William F., Sr., 65; September 23; colors.....Oct. 9
Ensor, John T., 56; June 5; fertilizers.June 12

Faus, Charles A., 79; drugs.....Feb. 13
Feist, Leopold, 71; November 17; petroleum.....Nov. 20
Fenton, Henry E., 63; November 1; drugs.....Nov. 13
Fisher, Charles Henry, 54; October 5; petroleum.....Oct. 16
Fitzpatrick, John A., 57; May 25; soap..June 5
Fletcher, Charles H., 84; April 9; proprietary medicines.....April 17
Forman, George V., 81; October 10; petroleum.....Oct. 16
Forthmann, John A., 79; April 13; soap..May 1
Frear, Dr. William, 62; January 7; agricultural chemist.....Jan. 16
Frueauff, Frank W., 48; July 31; petroleum.....Aug. 7
Fuller, Mrs. Charles N., November 14; daughter of Otis Clapp.....Nov. 20

Gesell, William J., 57; November 20; drugs.....Nov. 27
Gillman, Charles S., 61; October 4; paint.....Oct. 16
Gilman, John Abbott, 85; October 28; drugs.....Nov. 6
Glidden, Francis H., 90; September 26; paint.....Oct. 2
Grant, Herbert E., 61; May 5; paints..May 15
Griffith, Melvin S.; January 11; fertilizers.....Jan. 16
Guggenheim, Isaac, 68; October 10; lead.....Oct. 16

Hall, Charles Thurber, 77; starch.....Nov. 20
Hardee, William, 76; May 1; oil well supplies.....May 8
Heckendorn, Harry F., 40; November 26; colors.....Dec. 4
Heisey, Col. A. H., 77; February 13; glass.....Feb. 27
Herzfeld, Hugo J., 52; March 3; potash..Mar. 6
Hewitt, Herbert Hills; December 19; lead.....Dec. 25
Hewitt, George F., Sr., 73; May 25; glue.....May 29
Hood, Charles I., 77; February 5; drugs.Feb. 13
Horgan, Edward D.; February 25; brother of George V. Horgan.....Mar. 6
Hunter, John C.; July 29; steel barrels.Aug. 7

Johnston, William J., 71; December 5; drugs.....Dec. 18
Jones, Simon N., 75; March 8; drugs..Mar. 13

Kearns, Samuel J., 57; May 24; oil....May 29
Kellogg, Spencer, 71; November 14; linseed oil.....Nov. 20
Kemp, Edward Rogers, 50; June 9; petroleum.....June 12
Kinnan, John S., December 24; drugs.Jan. 2
Kirk, Harry Stanton, 57; February 12; drugs.....Mar. 13
Knappmann, William, 78; December 13; whiting.....Dec. 25
Kohnstamm, Emil Victor, 70; May 18; chemicals and dyestuffs.....May 22
Kutroff, Frederick, 49; October 22; dye and chemical importer.....Oct. 30

Lambert, Alfred; May 29; drugs.....June 12
Landis, Charles B.; April 24; chemicals.May 1
Lange, Leonard A., 73; drugs.....Feb. 13
Lang, Jacob F.; April 12; proprietary medicines.....April 24
Larendon, Michael Washington; August 20; naval stores.....Aug. 28
Loud, Theodore R. L., 70; August 19; drugs.....Aug. 28
Lukens, George W.; July 30; paint....Aug. 21
Lund, James, 64; September 29; chemicals.....Oct. 9

Macan, William A., 69; magnesia and asbestos.....Aug. 28
Manning, William Sheppard, Jr., 50; May 9; chemicals.....May 15
Marsh, Fred A., 52; December 11; machinery.....Dec. 25
Matthews, Charles B., June 16; petroleum refining.....June 26
Maycock, Joseph, 79; June 15; paint..June 26
Medbery, Frederick L., 59; July 23; linseed oil.....July 31
Merryweather, Weir, 54; September 8; paint.....Sept. 18
Miller, Charles D.; January 10; paints.Jan. 23

Norman, Charles R., 71; August 13; petroleum.....Aug. 21

Oburg, William F., 64; June 20; chemicals.....June 26
Ogden, Marion M., 63; September 1; petroleum expert.....Sept. 18
Olney, Henry Morrill, 61; May 7; paint.May 15

Page, Wilson R., 68; September 8; petroleum.....Sept. 18
Peek, Walter K., 60; December 2; drugs.....Dec. 11
Pennie, John C., 64; December 23; patent expert.....Jan. 2
Peuchen, Stanley C., 54; oils.....Sept. 25
Phillips, Alexander Walter, 32; December 9; chemicals.....Dec. 18
Pirce, James Aldrich, 51; sizes and glue.....Sept. 11
Pope, Charles, 79; March 25; glucose..April 3
Potts, Charles E., 76; July 30; drugs...Aug. 7
Pugh, William M.; January 3; chemist.Jan. 9

Quackinbush, Benjamin F., 67; December 21; druggist.....Dec. 25
Quin, Edwin G., 43; September 5; dyestuffs and chemicals.....Sept. 11

Raymond, Edward B., 53; September 9; plate glass.....Sept. 18
Richmond, Maurice J., 68; November 1; paint.....Nov. 6
Ripley, George C.; fine refining.....May 8
Roberts, William Burns, 49; April 24; petroleum.....May 8
Rockefeller, William, 81; June 24; petroleum.....July 3
Rockefeller, William Goodsill, 52; November 30; petroleum.....Dec. 4
Rosengarten, Mrs. H. B., 78; December 21; fine chemicals.....Dec. 25
Rowe, Reginald P., 72; July 17; paint..July 24
Rule, George S., 36; June 27; petroleum.July 3

Sands, Louis C.; November 5; petroleum.....Nov. 13
Scheele, Dr. Walter T., 52; March 5; chemist.....Mar. 13
Scott, William A., 72; August 10; drugs.....Aug. 14-28
See, Le Roy A., 39; July 19; dry colors.June 26
Seib, Harry 45; January 19; drugs....Feb. 6
Seim, Henry A., 78; May 9; glass and paint.....May 15
Sherman, George E., 52; July 6; soap and oils.....July 17
Sherwood, Theodore H., 76; January 8; drugs.....Jan. 16
Shoemaker, Mrs. Clayton F., Sr., 71; August 17; drugs.....Aug. 28
Smith, Prof. Alexander, 57; September 9; chemist.....Sept. 18
Smith, Charles E., 58; October 15; drugs.....Oct. 23
Snively, John H., 81; June 4; editorial staff, The Druggists Circular.....June 12
Solvay, Ernest, 84; May 26; chemicals.May 29
Starkie, Thomas M., 55; August 3; fine chemicals.....Aug. 7
Steel, John H., 44; May 2; oil operator.May 8
Stewart, William Buell, 69; September 5; proprietary medicines.....Sept. 11
Sturtevant, Alvan C., Jr., 70; June 2; drugs.....June 19
Sulzer, Louis, 60; February 18; drugs.Feb. 27-Mar. 6

Summers, Walter P., 48; August 30; fertilizers.....Sept. 4

Tagliabue, Charles J., 70; November 2; instruments.....Nov. 13
Takamine, Dr. Jokichi, 67; July 22; chemist.....July 31
Taplin, Charles G., 74; September 8; petroleum.....Oct. 2
Thompson, William Andrew, Jr., 50; July 24; petroleum.....July 31
Thompson, William N., 47; November 22; chemicals and dyestuffs.....Nov. 27

Vogeler, Alfred, 60; August 6; drugs..Aug. 14

Walden, J. Beverly, 58; November 26; vegetable oils.....Dec. 4
Wall, Prof. Otto A., 75; February 13; manufacturing pharmacist.....Feb. 20
Washburn, Frank Sherman, 61; October 9; chemicals.....Oct. 16
Watson, Dwight H., 65; drugs.....Aug. 28
White, George R., 74; drugs and chemicals.....Jan. 30
White, Dr. J. Fleming, 73; September 25; consulting chemist.....Oct. 2
Whithington, Frank P., 68; October 16; brushes.....Nov. 6
Wicke, Otto, 56; May 29; chemicals...April 3
Will, Anthony, 58; September 17; candles.....Sept. 25
Williams, Richard P., 76; November 5; drugs.....Nov. 13
Wiesner, William T.; January 8; fertilizers.....Jan. 16

Petroleum and Its Products: Market Review

The year 1922 was in many respects the most remarkable in the history of the petroleum industry in this country. In the first place, production was much the largest ever known and exceeded the forecasts of the most optimistic. Early in the year it had become popular in some quarters to make the most pessimistic predictions as to the depletion of American oil fields and to predict that in a few years this country would be depending upon other countries for most of its supplies, but the amount of oil brought in during 1922 was so great that before the end of the year an active propaganda had been started to urge the curtailment of production. The events of the year more firmly than ever established the United States as the world's greatest producer of oil, as there was nothing in the happenings in any other country that was at all to be compared with the development and expansion which went on in the petroleum industry of this country.

The into-sight movement of petroleum during the year was 551,197,000 barrels, according to the government statistics. This was the amount of crude petroleum transported from producing properties, and the figures are usually quoted as "production," although as a matter of fact it was not possible to move all the oil produced promptly, and the actual production was considerably larger than the into-sight figures. This production of 551,-197,000 barrels compared with 472,183,-000 in 1921, 442,929,000 in 1920, 378,367,-000 in 1919 and 355,928,000 in 1918. Not only was the production greater than ever known before, but there was a greater increase over the yield of the previous year than had ever before occurred. In 1919 the increase over the production of the preceding year was 22,439,000 barrels, in 1920 64,562,000 barrels, in 1921 29,254,000 barrels and in 1922 79,014,000 barrels.

The increase in production over that of 1921 was greater than the total production of the United States for any year up to 1902. This gives an idea of how great has been the expansion of this industry during the last twenty years and explains why there has been such an enormous expansion in the capital of the companies which have been active in the industry during all these years.

In addition to the record breaking domestic production there were imports of 124,340,000 barrels during the year. This was 1,024,000 barrels less than was imported during the preceding year, but much more than was ever imported in any year except 1921. The production of this country plus the imports gave a total of 675,537,000 barrels to supply this country for 365 days.

Consumption Broke All Records

Not only was there a record breaking amount of oil produced, but there was more consumed than ever before. Unless some other fuel for automobile engines is discovered, the ever increasing demand for gasoline will call for an increasing consumption of petroleum every year. According to the figures of the government statisticians, there was a slight decrease in consumption in 1921 from that of 1920, but that was not a normal condition of affairs. In all other recent years consumption has increased each year. The total consumption for 1922 was placed at 586,359,000 barrels, which was an increase of 60,327,000 barrels over that of 1921. This was a record breaking increase from one year to the next, and yet it did not equal the increase in the movement figures of domestic petroleum by 8,687,000 barrels, and definite progress was made towards making this country entirely independent of foreign petroleum.

There was the greatest increase in the reserve stocks of petroleum made during 1922 ever occurring in a single year before, and there was a record breaking supply of crude oil on hand in this country at the end of the year. In 1918 it was necessary to withdraw 23,510,000 barrels from stocks to satisfy the demands of consumption. The next year stocks were increased by 4,708,000 barrels. In 1920 there was an increase in stocks of 9,815,000 barrels and in 1921 of 62,575,000 barrels. In 1922 stocks were increased by 78,955,000 barrels, and at the end of the year there were stocks of crude oil in this country, aside from what was held on producing properties, of 264,578,000 barrels. Stocks on hand at the end of 1922 just about equaled the entire production of the United States for 1914.

Production of petroleum in this country was more than twice as much in 1922 as it was in 1914, and was equal to the production of the entire world in 1919. During the period of 1918-1922 production increased 55 per cent. and consumption 42 per cent. If this ratio is kept up for a short time longer the United States can depend solely on domestic oil. However, during that same period imports increased 229 per cent., against an increase of 109 per cent. in exports, and stocks increased 106 per cent.

About 17,400 new wells were brought in during the year, and at the end of the year there were approximately 275,000 producing wells in this country. The new production brought in during the year was proof positive that the time is not yet in sight when the producing capacity of this country will have been reached. There were new fields brought in in California, Oklahoma, Texas, Louisiana and Arkansas. The increase in California production was one of the most remarkable developments of the year. Among the new pools whose production helped to swell the total for the year were Long Beach, Santa Fe Springs and Huntington Beach in California; Burbank, Bristow and Tonkawa in Oklahoma; Mexia, Kosse, Currie, South Electra, Bunger, Pioneer and Mirando in Texas; Haynesville and Bellevue in Louisiana, and El Dorado and Smackover in Arkansas. While oil wells in old fields play out, and every well has some limit to its production, the sustained production of practically all the old pools was one of the noteworthy features of the year's record. There was an increase in the production of Wyoming and Montana during the year, and plans were made for extending the development work in those states to an extent that should mean a vast increase in the yield, as in both States much oil undoubtedly is waiting for the drill.

Curtailment Efforts Futile

The great production of the year was not stimulated by crude oil prices that could be classed as high. Some of the leading oil men claimed that the salvation of the industry lay in curtailing production, and urged that prices be cut until they forced curtailment. There was no curtailment worthy of the name, however, and prices were not low enough to discourage development work in any part of the country. In the summer of 1921 crude prices began to advance, after a sharp decline during the first part of the year, and by the beginning of 1922 they had reached a level that encouraged every effort to push production. In January, 1922, the price of mid-continent crude was $2 a barrel and it held that level until the middle of July, when it dropped to $1.50 a barrel, and in August the price was cut to $1.25 a barrel. In November mid-continent crude was put on a gravity basis, the $1.25 price being maintained on oil having a range in specific gravity between 33 and 34.9 degrees.

The high price for the year in all crude oils was that seen at the beginning of the year, but the fluctuations were not violent. Pennsylvania oil was 50c. a barrel lower at the end of the year than at the beginning.

Crude Oil

Of the 551,197,000 barrels of crude oil produced in the United States during the year, according to the Government figures, 305,789,000 barrels were produced in the mid-continent field, and 139,671,000 in California; the rest of the United States producing 105,737,-000 barrels. The Appalachian field produced 29,204,000 barrels; Lima-Indiana, 2,255,000; Illinois and Southwest Indiana, 10,211,000; Gulf Coast, 35,368,-000, and the Rocky Mountain district 28,698,000 barrels.

What was accomplished during the year in the way of increasing production is shown by a comparison of the December figures with those of January. During the first month of 1922 domestic production of crude oil in this country amounted to 43,141,000 barrels, and in December all records were broken by a production of 50,137,000 barrels, showing an increase in production of approximately 7,000,000 barrels a month within a one-year period. The production of the big mid-continent field was 25,080,000 barrels for January and 25,237,000 barrels for December, a difference of only 157,000 barrels. The average monthly production of this field was 25,482,400 barrels, and its record month was early in the year, for in March it broke records with a production of 27,789,000 barrels, which was not reached again.

The most remarkable record made by any section during the year was that of California. The production of this State during January was 9,753,-000 barrels, and during the last month of 1922 it produced 15,427,000 barrels. In other words, during the first month of the year it was producing at the rate of 117,036,000 barrels per annum and by the end of the year it was producing at the rate of 185,124,000 per annum. In no other part of the world was there as great an increase in production during the year as in California. While the actual increase in production was greater in California than any place else, the percentage production was not as great in that district as in the Rocky Mountain fields. There was a steady increase in the Rocky Mountain production throughout the year. In January it amounted to 1,791,000 barrels, and in December to 3,109,000 barrels, an increase of 77.5 per cent. The Far West has not been prospected as closely as have most other sections of the country, and the developments of the year were proof positive that in the States of California, Wyoming and Montana the oil possibilities are only beginning to be tested. In Montana and Wyoming there was a movement toward curtailment that held down production to an extent. It was not possible to take care of the oil produced, and the result of the great increase in production in this section during 1922 will mean the expenditure of a very large amount of money for tanks and pipelines during 1923.

Eastern Fields Hold On

Production in the older fields held up well during the year, and this was one of the reasons for the record breaking total of domestic production. The yield in the Appalachian field was very regular all the year and there were 2,337,-000 barrels produced during December, compared with 2,233,000 barrels during January. The Lima-Indiana fields produced 164,000 barrels during January, ran up to 204,000 barrels during June, and dropped back to 175,-000 barrels for December. The yield of the Illinois-Southwestern fields was very irregular. These fields yielded 994,000 barrels during January, and by April their production had dwindled to 745,000 barrels for that month. It jumped to 907,000 barrels for May and then sagged gradually until the end of the year. The December production was 791,000 barrels.

The Gulf Coast fields did not show any increase in their production during the year, but the yield held very steady. These fields produced 3,126,000 barrels in January and 3,061,000 barrels in December. The largest yield for any month of the year was 3,146,000 barrels for October, and the smallest yield for any month was 2,789,000 barrels for February.

The production for the year by fields, as compared with that of the previous year, follows, in barrels:

	1922.	1921.
Appalachian	29,204,000	30,574,000
Lima-Indiana	2,256,000	2,411,000
Illinois and Southwestern Indiana	10,211,000	10,935,000
Mid-continent	305,789,000	256,085,000
Gulf Coast	35,368,000	34,160,000
Rocky Mountain	28,698,000	20,765,000
California	139,671,000	114,709,000
Totals	551,197,000	469,639,000

If this country had been forced to depend on domestic oil alone there would have been no chance of an increase in the accumulation of crude oil during the year, but there were imports of 124,340,000 barrels of crude oil, and this made possible a decided increase in stocks of domestic crude during the year. The total pipeline and tank farm stocks east of California at the end of 1922 amounted to 214,319,000 barrels, against 149,193,000 at the end of 1921, an increase of 65,126,000 barrels. California stocks at the end of the year amounted to 49,375,000 barrels, as compared with 33,289,000 at the end of 1921, an increase of 16,086,000 barrels. Stocks of Mexican oil in this country at the end of the year amounted to 16,165,000 barrels, as compared with 13,540,000 at the end of 1921, an increase of 2,625,000 barrels. The increase of stocks of crude for the year, aside from the increases in the hands of producers, amounted to 83,837,000 barrels.

Imports Tapered Off

While the imports of Mexican oil for the year were very little smaller than for 1921, there was a great falling off in the import movement during the latter half of the year. There were 13,026,000 barrels of Mexican oil brought into this country during January, 1922. In March there were 13,944,000 barrels of Mexican oil brought in and in May 13,950,-000 barrels. In September the total was only 6,324,000 barrels, and in December 7,713,000 barrels. During the first half of the year the import movement of Mexican oil amounted to 76,760,000 barrels, and during the last half of the year to 46,934,000.

It was the falling off in the movement of Mexican oil into this country during the last six months of the year that made it possible for the weight of increase in domestic production to be as little felt as it was. Before the end of the year Atlantic seaboard refineries, which had been running on Mexican oil, were bringing crude from California to make up for the shortage caused by the decrease in the movement of Mexican.

The increase in production and the bringing in of new fields caused a great demand for additional storage space for crude oil, and the number of new tanks erected was probably the largest in any single year in the history of the industry

Refined Products

The one great objective of American refiners during the year was to increase the production of gasoline. There was not the same desire to increase production of all refinery products. On the contrary, it was a question how to increase gasoline production without causing an overproduction of some other products of crude petroleum. The increase in consumption is largely in gasoline, and more and more the industry is coming to depend for the bulk of its profits on what was once a despised by-product.

The effort to increase the production of gasoline was eminently successful. There was a steady increase during the year, and the production for December broke all records for a single month in the history of the industry. The December production amounted to 585,-049,677 gallons, or at the rate of over 7,000,000,000 gallons a year. The actual production of the year was estimated at 6,202,234,613 gallons, which was an increase of 20 per cent. over the production of the previous year. The total production of gasoline for 1921 was 5,-153,549,318 gallons. So that at the end of 1922 production was at a rate equivalent to an increase in production of about 2,000,000,000 gallons a year over the production of the previous year. There is no question about such an increase in production as this being able to take care of all the demands of increasing consumption, rapid as has been the increase in the demands for more fuel by the ever growing number of automobiles.

Kerosene is one of the materials that there is no great desire to produce in increasing quantities. The total production for 1922 was 2,306,326,489 gallons. This was greater than production for the previous year, when it was 1,-945,126,156 gallons, but not as large as in either 1920 or 1919. The production of gasoline in 1922 was 2,244,377,516 gallons greater than in 1919, while the production of kerosene was 35,305,665 gallons less. These figures explain better than anything else the problem the refiners have been working on and show how successful they have been increasing gasoline production without increasing that of kerosene.

The consumption of fuel and gas oils is increasing rapidly, and in this fact is found the salvation of the industry, for in the breaking up of enough crude oil to supply the demand for gasoline a large production of fuel oil is inevitable. All records were broken by the production of 10,706,226,570 gallons of fuel and gas oils during 1922. This was an increase of over 1,000,000,000 gallons over the production of 1921, which was 9,663,816,135 gallons. The increase amounted to 11 per cent.

The production of lubricating oils for the year amounted to 978,752,469 gallons. This was an increase over the previous year, but not as much as was produced in 1920. The production in that year amounted to 1,046,708,346 gallons. Production of wax was along the same lines as that of lubricating oils. The total production of 462,003,179 pounds was greater than that of 1921, but not as large as the production of 1920, which amounted to 541,404,537 pounds. Production in 1919, 1918 and 1917 was also larger than that of 1922. In other lines production in 1922 was also at a record breaking pace.

Output of Refineries

Following is the output of the different refinery products for the year, with comparisons with the previous year:—

Major Products

		1922.	1921.
Gasoline	gls.	6,202,234,613	5,153,549,318
Kerosene	gls.	2,306,326,489	1,945,126,156
Gas and fuel oils	gls.	10,706,226,570	9,663,816,135
Lubricating oils	gls.	978,752,469	877,859,074
Waxes	lbs.	462,003,179	433,887,214
Coke	tons	707,664	604,465
Asphalt	tons	1,895,257	1,214,536

Minor Products

Following is a list of the products usually listed under the general heading of "miscellaneous," with the production of each for 1922:—

	Gallons.
Distillate	835,493,016
Tops	287,577,980
Unfinished	375,251,855
Roofer's wax	101,213
Wax tailings	4,652,753
Tar	746,052
Sludge products	31,556,420
Flux	17,770,328
Road oil	116,235,063
Petrolatum	13,050,657
Medicinal oils	1,568,369
Paint products	4,448,747
Total miscellaneous products	1,688,452,453
Total miscell. products, 1921	1,202,433,163

Gasoline

According to the figures of the government, there were 6,202,234,613 gallons of gasoline produced in this country during 1922, and the domestic consumption amounted to 5,366,423,822 gallons, a surplus of production over domestic consumption of 835,900,791 gallons. Imports were 56,471,436 gallons and exports 594,576,498 gallons. Stocks at the end of the year amounted to 883,792,861 gallons, an increase of 297,-705,729 gallons. February was the month of smallest production and December saw the greatest production. In February production was only 393,-223,146 gallons, and in December it amounted to 585,049,677 gallons. There was an increase in production during the year that was so steady and rapid that the total production for the last six months of the year amounted

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556,947,519 gallons more than the production for the first half of the year. This increase in production of the latter half of the year over that of the first half amounted to almost as much as the exports for the entire year, and was considerably more than the exports minus the imports.

Besides being the month of smallest production, February was also the month of smallest consumption. Domestic consumption that month amounted to only 262,925,732 gallons. Peak consumption was reached in August, during which month domestic consumption amounted to 583,687,932 gallons. There were 320,762,200 gallons more gasoline used in August than in February, which shows to what a great extent gasoline consumption is a matter of seasons. It is necessary to accumulate reserve stocks during the period of small consumption in order to meet the heavy demands of summertime consumption. Stocks are always largest early in the spring, and stocks were largest during 1922 at the end of April, when they amounted to 892,567,766 gallons. By the end of September stocks had been reduced to 690,050,909 gallons, which was the low figure of the year. The decrease in stocks during May, June, July, August and September amounted to 202,516,957 gallons, or about ten days' production. During the last quarter of the year there was a rapid advance in stocks, which ended the year at 883,792,861 gallons, or only 8,744,905 gallons less than the record stocks of the end of the previous April.

Gasoline Statistics

Following is a comparative analysis of the production, consumption and stocks of gasoline (gallons) by months of the year:—

1922.	Production.	Imports.	Exports.*	Stocks end of period.	Domestic consumption.
January	444,622,784	8,250,393	50,531,969	705,711,191	282,717,148
February	393,223,146	4,979,625	38,608,969	867,379,261	262,925,732
March	472,277,870	9,335,689	54,354,387	854,231,655	380,406,778
April	472,920,182	10,581,720	59,901,921	892,567,766	385,263,870
May	513,658,966	7,104,879	57,182,166	856,607,102	499,242,343
June	525,940,600	3,986,655	54,093,665	824,966,456	506,964,236
July	569,711,415	4,840,098	60,497,191	772,908,949	566,111,829
August	549,958,376	2,829,062	38,270,145	703,738,310	583,687,932
September	536,491,988	4,563,315	46,808,277	690,050,809	507,934,527
October	566,278,689	†.....	43,073,107	723,584,062	489,672,329
November	567,100,921	†.....	43,918,191	776,723,619	470,043,173
December	585,049,677	†.....	47,703,071	883,792,861	430,277,365
1922 total	6,202,234,613	56,471,436	594,576,498	883,792,861	5,366,423,822
1921 total	5,153,549,318	37,816,004	551,647,048	586,087,132	4,516,012,979
1920 total	4,882,546,649	46,066,110	656,596,398	462,381,837	4,256,427,955
1919 total	3,957,857,097	8,520,169	382,100,092	446,793,431	3,434,810,726
1918 total	3,570,312,963	12,899,350	568,632,291	297,326,983	3,129,599,872

* Including shipments to Alaska, Hawaii and Porto Rico.
† Import figures not available.

Kerosene

Stocks of kerosene were so large at the beginning of the year that there was a very determined effort made to reduce them. Production was greatly curtailed during the first quarter of the year and, although there was a small increase in stocks during January, stocks at the beginning of February were the largest of the year. The year started in very poorly in this market. April was the poorest month as far as domestic consumption went. In that month the domestic consumption was only 94,309,706 gallons. This was the poorest month of the year as far as domestic takings were concerned, but it was the month that saw the heaviest export movement. Exports that month were almost as large as the domestic takings, the total being 90,091,310 gallons. The increase in export demand was at the expense of values, however, and very low prices were named to make April a record export month.

During the second half of the year there was a very decided improvement in the tone of the market. While exports did not reach the April total for any month, there was a steady improvement in domestic consumption, and a very much better market during the last quarter of the year than during the same quarter for 1921. So much better was the demand that there was a decided increase in production. The production during the first quarter of the year totaled 518,922,394 gallons, and during the last quarter of the year, 675,878,587 gallons. Domestic consumption during the first quarter of the year was 312,406,877 gallons and during the last quarter of the year 425,511,819 gallons. Allowing for all seasonal differences, these figures show that there was a decided improvement in the domestic kerosene market during the year and there was an advance in price that reflected this improvement.

There was not as good a showing made by the export figures as by those of domestic consumption, in that the last half year did not show as much improvement over the first half. There was a decided increase over the previous year, however, in both domestic consumption and exports. Exports for the year amounted to 902,535,070 gallons, as compared with 756,637,713 for the previous year; while domestic consumption was 1,463,749,642 gallons, as compared with 1,240,550,811 gallons for the previous year. Stocks were smallest at end of October, when they amounted to 256,259,432 gallons, by the end of the year they amounted to 281,050,332 gallons.

Kerosene Statistics

Following is a comparative analysis of the production, consumption and stocks of kerosene (gallons) for the year:—

1922.	Production.	Imports.*	Exports.†	Stocks end of period.	Domestic consumption.
January	172,917,141	.....	82,330,802	327,484,281	104,110,613
February	167,220,226	.....	62,711,423	331,423,111	100,569,973
March	178,785,027	.....	81,961,224	321,427,757	107,726,291
April	188,809,385	.....	90,091,310	325,836,126	94,309,706
May	173,824,113	.....	61,124,200	318,890,131	119,645,908
June	173,649,592	.....	71,525,734	317,574,464	103,439,525
July	192,924,420	.....	50,816,533	324,586,128	135,096,223
August	184,382,897	.....	87,316,297	285,520,131	136,132,597
September	197,935,102	.....	72,114,973	270,576,864	140,763,396
October	215,203,459	.....	84,331,437	256,259,432	145,180,454
November	234,436,275	.....	77,174,067	257,878,898	155,642,742
December	226,238,852	.....	78,386,897	281,050,332	124,679,623
1922 totals	2,306,326,489	.....	902,535,070	281,050,332	1,463,749,642
1921 totals	1,945,126,156	.....	756,637,713	341,008,555	1,240,550,811
1920 totals	2,320,095,443	.....	868,120,240	393,070,923	1,398,223,970
1919 totals	2,341,632,164	.....	985,687,664	339,319,690	1,396,742,639
1918 totals	1,825,360,137	.....	496,444,707	380,117,829	1,446,547,683

*No data available. †Includes shipments to Alaska, Hawaii and Porto Rico.

Fuel and Gas Oils

There was a very great increase in domestic consumption of both fuel and gas oil during the year. This was especially the case with fuel oil. Not only was there a very large increase in consumption to produce power, but oil was more used as a fuel for heating purposes than ever before. The scarcity of coal because of miners' strikes and poor railroad service furnished an incentive for an increased use of fuel oil, and very many thousands of plants for the burining of oil for heating purposes were installed during the year. In this movement the West was rather ahead of the East, but rapid progress was made in all sections of the country. The record breaking production of crude oil made it possible to greatly increase the production of fuel and gas oils; and, although the price advanced late in the year as a result of the improved demand, in many sections of the country oil was found to be a cheaper fuel than coal.

The production for the year reached the record breaking figure of 10,706,226,570 gallons. Production for the previous year had been the largest up to that time, but that of 1922 was more than a billion gallons greater than that of 1921. Domestic consumption was placed at 9,956,630,516 gallons, which was an increase of 1,739,080,804 gallons over domestic consumption for 1921. This was even a more notable increase than that shown in the domestic consumption of gasoline.

It was fortunate that there was this great increase in domestic takings, for the export figures for the year were not impressive. Total exports amounted to 776,133,643 gallons, which was 176,271,755 gallons less than the exports for 1921, and 467,610,387 gallons less than exports for 1918. In 1918 domestic consumption was almost four billion gallons less than in 1922.

The increase in production was fairly steady during the year and in December both production and domestic consumption broke all records. Production that month was 972,111,469 gallons, an increase of 114,000,592 gallons over the production for the first month of the year; while domestic consumption was 932,842,614 gallons, an increase of 127,274,464 gallons over the consumption for the first month of the year.

Production and consumption so well offset each other that there was not much change in stocks during the year. Stocks at the end of 1922 were 1,304,727,850 gallons, a decrease of 26,537,579 gallons for the year.

The light domestic consumption at the beginning of the year resulted in a decided increase in stocks, and this fact was felt in the market to an extent all year, although stocks declined from the first of March until the end of September. Stocks at the end of February amounted to 253,567,850 gallons and at the end of September to 214,727,811 gallons. During the last quarter of the year stocks were increasing again.

Following is a comparative analysis of the production, consumption and stocks of gas and fuel oil (gallons) for the year:—

1922.	Production.	Imports.*	Exports.†	Stocks end of period.	Domestic consumption.
January	858,110,877	.....	64,326,807	1,319,481,359	805,568,150
February	761,085,329	.....	51,689,295	1,321,589,479	707,287,914
March	849,105,582	.....	69,238,038	1,250,277,761	844,330,067
April	791,642,710	.....	49,017,525	1,282,800,569	710,102,377
May	936,742,331	.....	67,935,179	1,321,437,972	830,169,749
June	903,056,578	.....	56,996,811	1,326,939,662	840,558,077
July	959,028,518	.....	56,622,697	1,358,870,284	870,475,199
August	944,289,105	.....	67,183,900	1,366,611,611	869,363,878
September	917,857,786	.....	74,823,025	1,364,957,165	844,689,207
October	921,606,114	.....	63,315,723	1,368,748,880	854,498,676
November	891,590,171	.....	70,135,556	1,352,347,667	837,855,828
December	972,111,469	.....	86,888,672	1,304,727,850	932,842,614
1922 total	10,706,226,570	.....	776,133,643	1,304,727,850	9,956,630,516
1921 total	9,663,816,135	.....	952,405,398	1,331,265,439	8,217,549,712
1920 total	8,861,451,931	.....	927,337,152	837,404,414	7,810,834,820
1919 total	7,627,288,566	.....	692,480,435	714,124,455	6,879,685,033
1918 total	7,321,397,557	.....	1,243,744,030	659,001,357	5,996,551,282

* No data available.
† Including shipments to Alaska, Hawaii and Porto Rico. Not including fuel or bunker oil laden on vessels engaged in foreign trade.

Lubricating Oils

There was an increase in production of lubricating oils during 1922 over that of the previous year, and also an increase both in domestic consumption and in exports. Neither production nor exports were as large, however, as in 1920. In spite of the increase in takings, stocks were larger at the end of the year than at the beginning, and it was not a particularly good year in this branch of the oil business. There was a good deal of price cutting all year, and in a number of ways the business was not as satisfactory as it might have been. Production for the year was 978,752,469 gallons, an increase of 100,893,395 gallons. Domestic consumption was 626,299,277 gallons, an increase of 96,026,181 gallons over domestic consumption for 1921. Exports were 333,483,821 gallons, an increase of 42,140,982 gallons. Stocks at the end of the year were 235,734,787 gallons, an increase for the year of 18,969,271 gallons.

The year began with domestic consumption at a very low ebb. It amounted to only 14,501,144 gallons for January, but jumped to 37,075,547 gallons the next month, and by August had worked up to a total for that month of 67,601,583 gallons. This was the high water mark for the year. For December consumption was 56,495,965 gallons. The export business was better early in the year than it was later. The lack of improvement in the general industrial situation abroad was plainly apparent in the demand from other countries for American lubricants. Exports for the first quarter of the year amounted to 89,286,221 gallons and for the last quarter to 78,453,932 gallons. Exports for December were 23,983,490 gallons, and the lowest for any month in the year except February. Exports in December were 10,244,535 gallons less than those of March.

Lubricating Oils Statistics

Following is a comparative analysis of the production, consumption and stocks of lubricating oils (gallons) for the year:—

1922.	Production.	Imports.*	Exports.†	Stocks end of period.	Domestic consumption.
January	74,313,831	.....	31,347,681	245,230,522	14,501,144
February	69,123,390	.....	23,710,515	253,567,850	37,075,547
March	73,391,253	.....	34,228,025	236,886,381	55,844,697
April	72,945,168	.....	31,148,941	237,229,814	41,452,794
May	79,848,372	.....	24,692,702	226,293,334	66,092,150
June	80,138,257	.....	26,104,690	226,903,812	53,423,689
July	91,714,987	.....	28,448,377	236,090,749	63,479,675
August	88,824,133	.....	27,244,801	229,668,498	67,601,583
September	82,056,712	.....	28,136,445	214,727,811	59,860,954
October	87,346,814	.....	26,556,172	217,775,124	57,737,329
November	89,270,847	.....	27,914,270	226,429,537	52,702,164
December	89,784,705	.....	23,983,490	235,734,787	56,495,965
1922 total	978,752,469	.....	333,843,821	235,734,787	626,299,377
1921 total	877,859,074	.....	291,342,839	216,765,516	530,273,196
1920 total	1,046,708,349	.....	413,754,517	160,522,477	609,756,289
1919 total	846,760,017	.....	279,911,678	137,318,934	568,382,979
1918 total	841,465,767	.....	258,916,355	138,853,574	580,552,186

* No data available.
† Including shipments to Alaska, Hawaii and Porto Rico.

Petroleum Division, Department of Commerce: Its Functions, Ambitions and Achievements

By Henry C. Morris, Chief, Petroleum Division

The Petroleum Division of the Bureau of Foreign and Domstic Commerce has now been in existence for over a year and has made for itself an assured position among both exporters of petroleum products and also oil companies interested in acquiring and developing foreign concessions.

The work of the division is really divided into two major portions, one of which deals entirely with commercial matters, such as foreign markets for petroleum products, methods of selling, foreign competition, legal restrictions, and so on; the other consists of furnishing information and advice to American oil companies attempting to obtain and develop foreign concessions. The first phase of the work should interest every refiner and marketer of petroleum products, whether he is an exporter or not, for the reason that approximately 20 per cent. in value of these commodities are sold abroad, thus constituting an extremely important and too little appreciated outlet for our surplus supplies.

The division keeps currently informed of the trend of foreign trade with specific reference to methods of importation, facilities available at different ports for unloading and storage, methods of distribution from storage, methods of handling sales and terms of sale, foreign price competition, and related subjects. Information of this sort on particular countries is collected and published as Trade Information Bulletins, of which several have been distributed covering France, Spain, the United Kingdom, and other lands.

There is, however, in the division's files, a vast amount of more detailed but similar information which it is impossible to publish owing to limited printing appropriations, but which is used in answering correspondence and can be consulted by representatives of American companies at the Washington or district offices. In this connection the Petroleum Division wishes to emphasize the additional information and advice which can be obtained from our Tariff, Transportation, Commercial Laws and Commercial Intelligence divisions. The latter keeps on file the names and addresses, with some details of the organization, of thousands of importing companies all over the world arranged by locality and commodities handled.

The second function of the Petroleum Division, namely, the furnishing of information and advice to American oil companies seeking or exploiting foreign concessions, is necessarily one of a closely guarded nature, each case being handled individually. One of the chief accomplishments of the division, in this connection, is the establishment of cordial and confidential relations with the executives of many of the oil companies engaged in foreign work. To such officials is sent confidential information, which it is known or believed will be of use to them. Reciprocally the division is advised of many of the activities abroad of those companies interested in foreign fields so that it will know to whom to send information on any particular country or territory.

It is the ambition of the Petroleum Division to enlarge its circle of clients and friends so that it may directly serve all the organizations which are actively engaged in petroleum trade or development abroad. It is the sincere wish of the division that ultimately no individual or company will initiate any phase of the petroleum business in a foreign country in which it has had no recent experience without first obtaining from the Petroleum Division all of the pertinent information which it has. The division also obtains from its foreign representatives, upon request, specific information which we do not possess, so that the government's representatives in foreign fields may be increasingly useful to the American petroleum industry.

The division has some hope of being able to send abroad next year a representative who is especially qualified to study and report on the increasing competition which our petroleum export trade is meeting, particularly in Western Europe. We also hope that printing appropriations will enable us to issue an increasing number of Trade Information Bulletins on the more important petroleum markets of the world.

In short, the Petroleum Division wants you to take full advantage of the services it is equipped to render you and for which purpose Mr. Hoover has organized it.

Petroleum and Its Products: Record of Prices

Crude Prices at Wells

Cabell (W. Va.) Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$4.66	$3.96	$2.36	$2.11
February	3.71	1.96	2.11	2.11
March	1.86	1.86	2.11	2.11
April	2.16	1.86	2.11	2.11
May	1.86	1.81	2.11	2.11
June	1.81	1.31	2.36	2.11
July	1.31	1.11	2.36	1.86
August	1.11	1.11	1.86	1.86
September	1.11	1.11	1.86	1.86
October	2.36	1.11	1.86	1.86
November	2.61	2.36	1.86	1.86
December	2.61	2.61	1.86	1.86
Year	4.66	1.11	2.36	1.86

Corning (O.) Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$4.00	$3.50	$2.15	$1.90
February	3.00	1.90	1.90	1.90
March	1.90	1.90	1.90	1.90
April	2.15	1.90	1.90	1.90
May	1.90	1.90	1.90	1.90
June	1.90	1.40	2.05	1.90
July	1.40	1.20	2.05	1.90
August	1.20	1.20	1.90	1.75
September	1.20	1.20	1.75	1.75
October	2.15	1.20	1.75	1.75
November	2.15	2.15	1.75	1.75
December	2.15	2.15	1.75	1.75
Year	4.00	1.20	2.15	1.75

Lima Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.73	$3.48	$2.48	$2.48
February	3.23	2.73	2.48	2.48
March	2.48	2.48	2.48	2.48
April	2.48	2.48	2.48	2.48
May	2.48	2.08	2.48	2.48
June	2.08	1.58	2.48	2.48
July	1.58	1.58	2.48	1.98
August	1.58	1.58	1.98	1.98
September	1.58	1.58	1.98	1.98
October	2.08	1.58	1.98	1.98
November	2.48	2.08	1.98	1.98
December	2.48	2.48	1.98	1.98
Year	3.73	1.58	2.48	1.98

Pennsylvania Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$6.10	$5.50	$3.50	$3.25
February	5.00	3.25	3.25	3.25
March	3.00	3.00	3.25	3.25
April	3.50	3.00	3.25	3.25
May	3.00	3.00	3.25	3.25
June	3.00	2.50	3.50	3.25
July	2.50	2.25	3.50	3.00
August	2.25	2.25	3.00	3.00
September	2.25	2.25	3.00	3.00
October	3.50	2.25	3.00	3.00
November	4.00	3.50	3.00	3.00
December	4.00	4.00	3.00	3.00
Year	6.10	2.25	3.50	3.00

Waterloo Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.75	$1.75	$1.75	$1.25
February	1.75	1.75	1.75	1.75
March	1.75	1.75	1.75	1.75
April	1.75	1.75	1.75	1.75
May	1.75	1.50	1.75	1.75
June	1.50	.75	1.75	1.75
July	.75	.75	1.75	1.25
August	.75	.75	1.25	1.25
September	.75	.75	1.25	1.25
October	1.25	.75	1.25	1.25
November	1.25	1.25	1.25	1.25
December	1.25	1.25	1.25	1.25
Year	1.75	.75	1.75	1.25

Wooster (O.) Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$4.05	$3.80	$2.70	$2.70
February	3.80	2.80	2.70	2.60
March	2.80	2.80	2.60	2.60
April	2.80	2.80	2.60	2.60
May	2.80	2.30	2.60	2.60
June	2.30	1.80	2.60	2.60
July	1.80	1.80	2.60	2.10
August	1.80	1.80	2.10	2.10
September	1.80	1.80	2.10	2.10
October	2.30	1.80	1.90	1.90
November	2.70	2.30	1.90	1.90
December	2.70	2.70	1.90	1.90
Year	4.05	1.80	2.70	1.90

Illinois Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.77	$3.52	$2.27	$2.27
February	3.27	2.77	2.27	2.27
March	2.52	2.52	2.27	2.27
April	2.52	2.52	2.27	2.27
May	2.52	2.02	2.27	2.27
June	2.02	1.52	2.27	2.27
July	1.52	1.27	2.27	1.77
August	1.27	1.27	1.77	1.77
September	1.27	1.27	1.77	1.77
October	1.77	1.27	1.77	1.77
November	2.27	1.77	1.77	1.77
December	2.27	2.27	1.77	1.77
Year	3.77	1.27	2.27	1.77

Indiana Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.63	$3.38	$2.28	$2.28
February	3.13	2.63	2.28	2.28
March	2.52	2.52	2.28	2.28
April	2.43	2.38	2.28	2.28
May	2.38	2.13	2.28	2.28
June	2.13	1.63	2.28	2.28
July	1.63	1.38	2.28	1.78
August	1.38	1.38	1.78	1.78
September	1.38	1.38	1.78	1.78
October	1.88	1.38	1.78	1.78
November	2.28	1.88	1.78	1.78
December	2.28	2.28	1.78	1.78
Year	3.63	1.38	2.28	1.78

Plymouth (Ill.) Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.48	$3.23	$1.65	$1.15
February	2.98	1.98	1.65	1.65
March	2.38	2.38	1.65	1.65
April	1.75	1.75	1.65	1.65
May	1.75	1.50	1.65	1.65
June	1.50	.90	1.65	1.15
July	.90	.65	1.65	1.15
August	.65	.65	1.15	1.15
September	.65	.65	1.15	1.15
October	1.15	.65	1.15	1.15
November	1.15	1.15	1.15	1.15
December	1.15	1.15	1.15	1.15
Year	3.48	.65	1.65	1.15

Homer Field, 32 to 34.9 Gravity

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.10	$3.10	$1.85	$1.85
February	2.10	1.60	1.85	1.85
March	1.60	1.60	1.85	1.85
April	1.60	1.60	1.85	1.85
May	1.60	1.35	1.85	1.85
June	1.35	1.10	1.85	1.85
July	1.10	1.10	1.85	1.35
August	1.10	1.10	1.35	1.10
September	1.10	1.10	1.10	1.10
October	1.35	1.10	1.10	1.10
November	1.85	1.35	1.10	1.10
December	1.85	1.85	1.10	1.10
Year	3.10	1.10	1.85	1.10

Homer Field, Heavy, Below 32 Gravity

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.75	$1.75	$1.50	$1.50
February	1.25	1.25	1.50	1.50
March	1.25	1.25	1.50	1.50
April	1.25	1.25	1.50	1.50
May	1.00	1.00	1.50	1.50
June	1.00	.75	1.50	1.50
July	.75	.75	1.50	1.00
August	.75	.75	1.00	.75
September	.75	.75	.75	.75
October	1.00	.75	.75	.75
November	1.50	1.00	.75	.75
December	1.50	1.50	.75	.75
Year	1.75	.75	1.50	.75

Homer Field, 36 Gravity and Above

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.25	$3.25	$2.00	$2.00
February	2.45	1.75	2.00	2.00
March	1.75	1.75	2.00	2.00
April	1.75	1.75	2.00	2.00
May	1.75	1.50	2.00	2.00
June	1.50	1.25	2.00	2.00
July	1.25	1.25	2.00	1.50
August	1.25	1.25	1.50	1.25
September	1.25	1.25	1.25	1.25
October	1.50	1.25	1.25	1.25
November	2.00	1.50	1.25	1.25
December	2.00	2.00	1.25	1.25
Year	3.25	1.25	2.00	1.25

Homer Field, 35 to 35.9 Gravity

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.15	$3.15	$1.90	$1.90
February	2.15	1.90	1.90	1.90
March	1.65	1.65	1.90	1.90
April	1.65	1.65	1.90	1.90
May	1.65	1.40	1.90	1.90
June	1.40	1.15	1.90	1.90
July	1.15	1.15	1.90	1.40
August	1.15	1.15	1.40	1.15
September	1.15	1.15	1.15	1.15
October	1.40	1.15	1.15	1.15
November	1.90	1.40	1.15	1.15
December	1.90	1.90	1.15	1.15
Year	3.15	1.15	1.90	1.15

Haynesville Field, 34 Gravity and Above

	1921. H.	1921. L.	1922. H	1922. L.
January	Not quoted		$1.85	$1.85
February	Not quoted		1.85	1.50
March	Not quoted		1.85	1.50
April	Not quoted		1.85	1.50
May	Not quoted		1.85	1.50
June	$1.00	$1.00	1.85	1.85
July	1.00	1.00	1.85	1.35
August	1.00	1.00	1.80@1.25	1.80@1.25
September	.75	.75	1.80@1.25	1.80@1.25
October	1.35	1.25	1.80@1.25	1.80@1.25
November	1.85	1.35	1.80@1.25	1.80@1.25
December	1.85	1.85	1.80@1.25	1.80@1.25
Year	1.85	.75	1.85	1.25

After July, 1922, on gravity basis.

Haynesville Field, Below 34 Gravity

	1921. H.	1921. L.	1922. H.	1922. L.
January	Not quoted		$1.75	$1.75
February	Not quoted		1.75	1.40
March	Not quoted		1.40	1.15
April	Not quoted		1.40	1.15
May	Not quoted		1.40	1.15
June	$0.90	$0.90	1.75	1.75
July	.90	.90	1.75	1.25
August	.90	.90	1.25@1.10	1.25@1.10
September	.65	.65	1.25@1.10	1.25@1.10
October	1.25	.75	1.25@1.10	1.25@1.10
November	1.75	1.25	1.25@1.10	1.25@1.10
December	1.75	1.75	1.25@1.10	1.25@1.10
Year	1.75	.65	1.75	1.10

After July, 1922, on gravity basis.

El Dorado Field, Below 34 Gravity

	1921. H.	1921. L.	1922. H.	1922. L.
January	Not quoted		$1.75@1.50	$1.75@1.50
February	Not quoted		1.75@1.50	1.75@1.50
March	Not quoted		1.75@1.50	1.75@1.50
April	Not quoted		1.75	1.75
May	.60	.50	1.75	1.75
June	.60	.50	1.75	1.75
July	.60	.50	1.75	1.25
August	.60	.50	1.75	1.00
September	.70	.60	1.00	1.00
October	1.40	.90	1.00	1.00
November	1.75	1.40	1.00	1.00
December	1.75	1.75	1.25@1.10	1.25@1.10
Year	1.75	.50	1.75	1.00

El Dorado Field, 34 Gravity and Above

	1921. H.	1921. L.	1922. H.	1922. L.
January	Not quoted		$2.00@1.50	$2.00@1.50
February	Not quoted		2.00@1.50	2.00@1.50
March	Not quoted		2.00@1.50	2.00@1.50
April	Not quoted		2.00	2.00
May	.70	.70	2.00	2.00
June	.70	.70	2.00	2.00
July	.70	.70	2.00	1.50
August	.70	.70	1.50	1.25
September	.80	.70	1.25	1.25
October	1.50	1.00	1.25	1.25
November	2.00	1.50	1.25	1.25
December	2.00	2.00	1.80@1.25	1.80@1.25
Year	2.00	.70	2.00	1.25

De Soto Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.40	$3.40	$2.00	$2.00
February	2.40	1.90	2.00	2.00
March	1.90	1.90	2.00	2.00
April	1.90	1.90	2.00	2.00
May	1.90	1.65	2.00	2.00
June	1.65	1.15	2.00	2.00
July	1.15	1.15	2.00	1.50
August	1.15	1.15	1.50	1.25
September	1.15	1.15	1.25	1.25
October	1.50	1.15	1.25	1.25
November	2.00	1.50	1.25	1.25
December	2.00	2.00	1.25	1.25
Year	3.40	1.15	2.00	1.25

Western Kentucky Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	Not quoted		$2.40	$1.90
February	$1.08	$1.08	1.90	1.90
March	1.33	1.33	1.90	1.90
April	1.33	1.33	1.90	1.90
May	1.33	1.33	1.90	1.90
June	1.33	1.28	1.90	1.90
July	1.28	.58	1.90	1.65
August	.70	.58	1.65	1.65
September	.78	.70	1.65	1.65
October	1.83	.78	1.65	1.65
November	2.08	1.83	1.65	1.65
December	2.40	2.08	1.65	1.65
Year	2.40	.58	2.40	1.65

Bull Bayou Field, 38 Gravity and Above

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.15	$3.15	$1.90	$1.90
February	2.65	1.65	1.90	1.90
March	1.65	1.65	1.90	1.90
April	1.65	1.65	1.90	1.90
May	1.65	1.40	1.90	1.90
June	1.40	.90	1.90	1.90
July	.90	.90	1.90	1.40
August	.90	.90	1.40	1.15
September	.90	.90	1.15	1.15
October	1.40	.90	1.15	1.15
November	1.90	1.40	1.15	1.15
December	1.90	1.90	1.40	1.15
Year	3.15	.90	1.90	1.15

Bull Bayou Field, 32 to 34.8 Gravity

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.00	$3.00	$1.75	$1.75
February	2.50	1.50	1.75	1.75
March	1.50	1.50	1.75	1.75
April	1.85	1.85	1.75	1.75
May	1.85	1.25	1.75	1.75
June	1.25	.75	1.75	1.75
July	.75	.75	1.75	1.35
August	.75	.75	1.35	1.00
September	.75	.75	1.00	1.00
October	1.25	.75	1.00	1.00
November	1.75	1.25	1.00	1.00
December	1.75	1.75	1.25	1.00
Year	3.00	.75	1.75	1.00

Bull Bayou Field, 35 to 37.9 Gravity

	1921. H.	1921. L.	1922. H.	1922. L.
January	Not quoted		$1.80	$1.80
February	$2.55	$1.55	1.80	1.80
March	1.55	1.55	1.80	1.80
April	1.90	1.55	1.80	1.80
May	1.55	1.30	1.80	1.80
June	1.30	.80	1.80	1.80
July	.80	.80	1.80	1.40
August	.80	.80	1.40	1.05
September	.80	.80	1.05	1.05
October	1.30	.80	1.05	1.05
November	1.80	1.30	1.05	1.05
December	1.80	1.80	1.30	1.05
Year	2.55	.80	1.80	1.05

Caddo Field, 38 Gravity and Above

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.15	$3.15	$2.00	$2.00
February	2.65	2.00	2.00	2.00
March	2.00	2.00	2.00	2.00
April	2.00	2.00	2.00	2.00
May	2.00	1.75	2.00	2.00
June	1.75	1.25	2.00	2.00
July	1.25	1.25	2.00	1.50
August	1.25	1.25	1.50	1.25
September	1.25	1.25	1.25	1.25
October	1.50	1.25	1.25	1.25
November	2.00	1.50	1.25	1.25
December	2.00	2.00	1.60@1.80	1.25
Year	3.15	1.25	2.00	1.25

Caddo Field, Heavy, Under 32 Gravity

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.50	$2.00	$1.25	$1.25
February	1.25	1.25	1.25	1.25
March	1.25	1.25	1.25	1.25
April	1.25	1.25	1.25	1.25
May	1.25	1.00	1.25	1.25
June	1.00	.60	1.25	1.25
July	.60	.60	1.25	.75
August	.60	.60	.75	.75
September	.60	.60	.75	.75
October	1.10	.60	.75	.75
November	1.25	1.10	.75	.75
December	2.50	2.50	.75	.75
Year	2.50	.60	1.25	.75

Caddo Field, 35 to 37.9 Gravity

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.40	$3.40	$1.90	$1.90
February	2.40	1.90	1.90	1.90
March	1.90	1.90	1.90	1.90
April	1.90	1.90	1.90	1.90
May	1.90	1.65	1.90	1.90
June	1.65	1.15	1.90	1.90
July	1.15	1.15	1.90	1.40
August	1.15	1.15	1.40	1.15
September	1.15	1.15	1.15	1.15
October	1.40	1.15	1.15	1.15
November	1.90	1.40	1.15	1.15
December	1.90	1.90	1.25	1.15
Year	3.40	1.15	1.90	1.15

Caddo Field, 32 to 34.7 Gravity

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.35	$3.35	$1.85	$1.85
February	2.35	1.85	1.85	1.85
March	1.85	1.85	1.85	1.85
April	1.85	1.85	1.85	1.85
May	1.85	1.60	1.85	1.85
June	1.60	1.10	1.85	1.85
July	1.10	1.10	1.85	1.35
August	1.10	1.10	1.35	1.10
September	1.10	1.10	1.10	1.10
October	1.35	1.10	1.10	1.10
November	1.85	1.35	1.10	1.10
December	1.85	1.85	1.25	1.10
Year	3.35	1.10	1.85	1.10

Crichton Field, Light Oil

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.00	$3.00	$1.75	$1.75
February	2.50	2.00	1.75	1.75
March	1.50	1.50	1.75	1.75
April	1.50	1.50	1.75	1.75
May	1.50	1.25	1.75	1.75
June	1.25	.75	1.75	1.75
July	.75	.75	1.75	1.25
August	.75	.75	1.25	1.00
September	.75	.75	1.00	1.00
October	1.25	.75	1.00	1.00
November	1.75	1.25	1.00	1.00
December	1.75	1.75	1.25	1.00
Year	3.00	.75	1.75	1.00

Midcontinent Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.50	$3.50	$2.00	$2.00
February	3.50	2.25	2.00	2.00
March	2.25	1.75	2.00	2.00
April	1.75	1.75	2.00	2.00
May	1.75	1.50	2.00	2.00
June	1.50	1.00	2.00	2.00
July	1.00	1.00	2.00	1.50
August	1.00	1.00	1.50	1.25
September	1.00	1.00	1.25	1.25
October	1.75	1.00	1.25	1.25
November	2.00	1.75	1.80@.80	1.25
December	2.00	2.00	1.80@.80	1.80@.65
Year	3.50	1.00	2.00	1.25

After October, 1922, on gravity basis.

Walters and Beaver Creek Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	Not quoted.		$1.30	$1.30
February	Not quoted.		1.30	1.00
March	$1.00	$1.00	1.00	1.00
April	1.00	1.00	1.00	1.00
May	1.00	1.00	1.00	1.00
June	1.00	.60	1.00	1.00
July	.60	.60	1.00	.85
August	.60	.60	.85	.75
September	.60	.60	.75	.75
October	.80	.60	.75	.75
November	.95	.85	.75	.75
December	1.30	1.30	.75	.75
Year	1.30	.60	1.30	.75

Somerset Field, Light Oil

	1921. H.	1921. L.	1922. H.	1922. L.
January	$4.50	$4.00	$2.40	$2.15
February	3.75	2.00	2.15	2.15
March	1.80	1.80	2.15	2.15
April	2.20	1.80	2.15	2.15
May	1.80	1.80	2.15	2.15
June	1.80	1.30	2.15	2.15
July	1.30	1.00	2.40	2.15
August	1.25	1.00	2.40	1.90
September	1.25	1.25	1.90	1.90
October	2.40	1.25	1.95	1.90
November	2.65	2.40	1.95	1.95
December	2.65	2.65	1.95	1.95
Year	4.50	1.00	2.40	1.90

Somerset Field, Medium Oil

	1921. H.	1921. L.	1922. H.	1922. L.
January	$4.25	$3.75	$2.15	$1.90
February	3.50	1.75	1.90	1.90
March	1.65	1.65	1.90	1.90
April	1.95	1.65	1.90	1.90
May	1.65	1.60	1.90	1.90
June	1.60	1.10	2.15	1.90
July	1.10	.90	2.15	1.65
August	1.10	.90	1.71	1.71
September	1.10	1.10	1.71	1.71
October	2.15	1.10	1.71	1.71
November	2.40	2.15	1.71	1.71
December	2.40	2.40	1.71	1.71
Year	4.25	.90	2.15	1.65

Princeton (Ind.) Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.77	$3.52	$2.27	$2.27
February	3.27	2.77	2.27	2.27
March	2.52	2.52	2.27	2.27
April	2.52	2.52	2.27	2.27
May	2.52	2.50	2.27	2.27
June	2.50	1.52	2.27	2.27
July	1.52	1.27	2.27	1.77
August	1.27	1.27	1.77	1.77
September	1.27	1.27	1.77	1.77
October	1.77	1.27	1.77	1.77
November	2.27	1.77	1.77	1.77
December	2.27	2.27	1.77	1.77
Year	3.77	1.27	2.27	1.77

Ragland Field

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.60	$2.00	$1.15	$1.00
February	1.75	1.00	1.00	1.00
March	1.00	1.00	1.00	1.00
April	1.25	1.00	1.00	1.00
May	1.25	1.25	1.00	1.00
June	1.25	.75	1.25	1.00
July	.75	.60	1.25	1.00
August	.60	.60	1.00	1.00
September	.60	.60	1.00	1.00
October	1.15	.60	1.00	1.00
November	1.25	1.15	1.00	1.00
December	1.25	1.25	1.00	1.00
Year	2.60	.60	1.25	1.00

California, San Joaquin Valley and Whittier-Fullerton Fields, 14 to 17.9 Gravity

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.60	$1.60	$1.10	$1.10
February	1.60	1.60	1.10	1.10
March	1.60	1.60	1.10	1.10
April	1.60	1.60	1.10	1.10
May	1.60	1.35	1.10	1.10
June	1.35	1.35	1.10	1.10
July	1.35	1.35	1.10	.60
August	1.35	1.10	.60	.60
September	1.10	1.10	.60	.60
October	1.10	1.10	.60	.60
November	1.10	1.10	.60	.60
December	1.10	1.10	.60	.60
Year	1.60	1.10	1.10	.60

California Fields, 21 Gravity

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.70	$1.70	$1.20	$1.20
February	1.70	1.70	1.20	1.20
March	1.70	1.70	1.20	1.20
April	1.70	1.70	1.20	1.20
May	1.70	1.45	1.20	1.20
June	1.45	1.45	1.20	1.20
July	1.45	1.45	1.20	.67
August	1.45	1.20	.67	.67
September	1.20	1.20	.67	.67
October	1.20	1.20	.67	.67
November	1.20	1.20	.67	.67
December	1.20	1.20	.67	.67
Year	1.70	1.20	1.20	.67

California Fields, 26 Gravity

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.05	$2.05	$1.55	$1.55
February	2.05	2.05	1.55	1.55
March	2.05	2.05	1.55	1.55
April	2.05	2.05	1.55	1.55
May	2.05	1.80	1.55	1.55
June	1.80	1.80	1.55	1.55
July	1.80	1.80	1.55	1.05
August	1.80	1.55	1.05	1.05
September	1.55	1.55	1.05	1.05
October	1.55	1.55	1.05	1.05
November	1.55	1.55	1.05	1.05
December	1.55	1.55	1.05	1.05
Year	2.05	1.55	1.55	1.05

California Fields, 35 Gravity and Above

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.95	$2.95	$2.45	$2.45
February	2.95	2.95	2.45	2.45
March	2.95	2.95	2.45	2.45
April	2.95	2.95	2.45	2.45
May	2.95	2.70	2.45	2.45
June	2.70	2.70	2.45	2.45
July	2.70	2.70	2.45	1.95
August	2.70	2.45	1.95	1.95
September	2.45	2.45	1.95	1.95
October	2.45	2.45	1.95	1.95
November	2.45	2.45	1.95	1.95
December	2.45	2.45	1.95	1.95
Year	2.95	2.45	2.45	1.95

Salt Creek Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	Not quoted		$1.40	$1.40
February	Not quoted		1.40	1.40
March	$1.40	$1.40	1.40	1.40
April	1.40	1.40	1.40	1.40
May	1.40	1.10	1.40	1.40
June	1.10	.75	1.40	1.40
July	.75	.50	1.40	.90
August	.50	.50	.90	.70
September	.50	.50	.70	.70
October	.90	.50	.70	.70
November	1.40	.90	.70	.70
December	1.40	1.40	1.15	.70
Year	1.40	.50	1.40	.70

Torchlight Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	Not quoted		$1.95	$1.95
February	Not quoted		1.95	1.95
March	$1.75	$1.75	1.95	1.95
April	1.75	1.75	1.95	1.95
May	1.75	1.50	1.95	1.95
June	1.50	1.15	1.95	1.95
July	1.15	1.00	1.95	1.70
August	1.00	1.00	1.70	1.50
September	1.00	1.00	1.50	1.50
October	1.45	1.00	1.50	1.50
November	1.95	1.45	1.50	1.50
December	1.95	1.95	1.50	1.50
Year	1.95	1.00	1.95	1.50

Rock Creek Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.75	$2.75	$1.50	$1.50
February	2.00	1.50	1.50	1.50
March	1.50	1.50	1.50	1.50
April	1.50	1.50	1.50	1.50
May	1.50	1.10	1.50	1.50
June	1.10	.75	1.50	1.50
July	.75	.60	1.50	1.00
August	.60	.60	1.00	.80
September	.60	.60	.80	.80
October	1.05	.60	.80	.80
November	1.50	1.05	.80	.80
December	1.50	1.50	1.15	.80
Year	2.75	.60	1.50	.80

Mule Creek Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.25	$1.85	$1.35	$1.35
February	1.45	.95	1.35	1.35
March	.95	.95	*1.35	*1.35
April	.95	.95	*1.35	*1.35
May	.95	.80	*1.35	*1.35
June	.80	.50	*1.35	*1.35
July	.50	.45	1.35	.85
August	.45	.45	.85	.65
September	.45	.45	.65	.65
October	.90	.45	.65	.65
November	1.35	.90	.65	.65
December	1.35	1.35	.90	.65
Year	2.25	.45	1.35	.65

* Nominal.

Grass Creek Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$4.10	$2.60	$1.90	$1.90
February	2.25	1.75	1.90	1.90
March	1.75	1.75	1.90	1.90
April	1.75	1.50	1.90	1.90
May	1.50	1.50	1.90	1.90
June	1.50	1.00	1.90	1.90
July	1.00	1.00	1.90	1.40
August	1.00	1.00	1.40	1.20
September	1.00	1.00	1.20	1.20
October	1.45	1.00	1.20	1.20
November	1.90	1.45	1.20	1.20
December	1.90	1.90	1.50	1.20
Year	3.10	1.00	1.90	1.20

Greybull Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	Not quoted		$1.95	$1.95
February	Not quoted		1.95	1.95
March	1.75	1.75	1.95	1.95
April	1.75	1.75	1.95	1.95
May	1.75	1.50	1.95	1.95
June	1.50	1.00	1.95	1.95
July	1.00	1.00	1.95	1.45
August	1.00	1.00	1.45	1.20
September	1.00	1.00	1.20	1.20
October	1.45	1.00	1.20	1.20
November	1.95	1.45	1.20	1.20
December	1.95	1.95	1.50	1.20
Year	1.95	1.00	1.95	1.20

Big Muddy (Wyo.) Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.75	$1.85	$1.40	$1.40
February	1.90	1.40	1.40	1.40
March	1.40	1.40	1.40	1.40
April	1.40	1.15	1.40	1.40
May	1.15	1.00	1.40	1.40
June	1.00	.65	1.40	1.40
July	.50	.50	1.40	.90
August	.50	.50	.90	.70
September	.50	.50	.70	.70
October	.90	.50	.70	.70
November	1.40	.90	.70	.70
December	1.40	1.40	1.05	.70
Year	2.75	.50	1.40	.70

Elk Basin Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.10	$2.60	$1.90	$1.90
February	2.25	1.75	1.90	1.90
March	1.75	1.75	1.90	1.90
April	1.75	1.50	1.90	1.90
May	1.50	1.50	1.90	1.90
June	1.50	1.00	1.90	1.90
July	1.00	1.00	1.90	1.40
August	1.00	1.00	1.40	1.20
September	1.00	1.00	1.20	1.20
October	1.45	1.00	1.20	1.20
November	1.90	1.45	1.20	1.20
December	1.90	1.90	1.50	1.20
Year	3.10	1.00	1.90	1.20

Vinton Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.50	$2.00	$1.25	$1.25
February	1.50	1.25	1.25	1.25
March	1.25	1.25	1.25	1.25
April	1.25	1.00	1.25	1.25
May	1.25	1.00	1.25	1.25
June	1.00	.80	1.25	1.25
July	.80	.80	1.25	1.25
August	.80	.80	1.25	1.25
September	.80	.80	1.25	1.25
October	1.00	.80	1.25	1.25
November	1.25	1.00	1.25	1.25
December	1.25	1.25	1.25	1.25
Year	2.50	.80	1.25	1.25

West Columbia Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.50	$2.00	$1.25	$1.25
February	1.50	1.25	1.25	1.25
March	1.25	1.00	1.25	1.25
April	1.25	1.00	1.25	1.25
May	1.25	1.00	1.25	1.25
June	1.00	.80	1.25	1.25
July	.80	.80	1.25	1.25
August	.80	.80	1.25	1.25
September	.80	.80	1.25	1.25
October	1.00	.80	1.25	1.25
November	1.25	1.00	1.25	1.25
December	1.25	1.25	1.25	1.25
Year	2.50	.80	1.25	1.25

Sour Lake Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.50	$2.00	$1.25	$1.25
February	1.50	1.75	1.25	1.25
March	1.25	1.25	1.25	1.25
April	1.25	1.00	1.25	1.25
May	1.25	1.00	1.25	1.25
June	1.00	.80	1.25	1.25
July	.80	.80	1.25	1.25
August	.80	.80	1.25	1.25
September	.80	.80	1.25	1.25
October	1.00	.80	1.25	1.25
November	1.25	1.00	1.25	1.25
December	1.25	1.25	1.25	1.25
Year	2.50	.80	1.25	1.25

Spindletop Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.50	$2.00	$1.25	$1.25
February	1.50	1.25	1.25	1.25
March	1.25	1.25	1.25	1.25
April	1.25	1.00	1.25	1.25
May	1.25	1.00	1.25	1.25
June	1.00	.80	1.25	1.25
July	.80	.80	1.25	1.25
August	.80	.80	1.25	1.25
September	.80	.80	1.25	1.25
October	1.00	.80	1.25	1.25
November	1.25	1.00	1.25	1.25
December	1.25	1.25	1.25	1.25
Year	2.50	.80	1.25	1.25

Pierce Junction Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	Not quoted		$1.25	$0.80
February	Not quoted		1.25	.80
March	Not quoted		1.25	.80
April	Not quoted		1.25	.80
May	Not quoted		1.25	.80
June	Not quoted		1.25	.80
July	Not quoted		1.25	.80
August	$0.65	$0.65	1.25	.80
September	.65	.65	1.25	.80
October	.65	.65	1.25	.80
November	1.05	.65	1.25	.80
December	1.05	1.05	1.25	.80
Year	1.05	.65	1.25	.80

Saratoga Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.50	$2.00	$1.25	$1.25
February	1.50	1.25	1.25	1.25
March	1.25	1.25	1.25	1.25
April	1.25	1.00	1.25	1.25
May	1.00	1.00	1.25	1.25
June	1.00	.80	1.25	1.25
July	.80	.80	1.25	1.25
August	.80	.80	1.25	1.25
September	.80	.80	1.25	1.25
October	1.00	.80	1.25	1.25
November	1.25	1.00	1.25	1.25
December	1.25	1.25	1.25	1.25
Year	2.50	.80	1.25	1.25

Somerset (Tex.) Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.50	$2.00	$1.25	$1.25
February	1.50	1.25	1.25	1.25
March	1.35	1.25	1.25	1.25
April	1.25	1.00	1.25	1.25
May	1.00	1.00	1.25	1.25
June	1.00	.80	1.25	1.25
July	.80	.80	1.25	1.25
August	1.00	.80	1.25	1.25
September	1.00	1.00	1.25	1.25
October	1.00	1.00	1.25	1.25
November	1.75	1.00	1.25	1.25
December	1.75	1.75	1.25	1.25
Year	2.50	.80	1.25	1.25

Humble Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.50	$2.00	$1.25	$0.80
February	1.50	1.25	1.25	.80
March	1.25	1.25	1.25	1.25
April	1.25	1.00	1.25	1.25
May	1.25	1.00	1.25	1.25
June	1.00	.80	1.25	1.25
July	.80	.80	1.25	1.25
August	.80	.80	1.25	1.25
September	.80	.80	1.25	1.25
October	1.00	.80	1.25	1.25
November	1.25	1.00	1.25	1.25
December	1.25	1.25	1.25	1.25
Year	2.50	.80	1.25	.80

Jennings Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.50	$2.00	$1.25	$1.25
February	1.50	1.25	1.25	1.25
March	1.25	1.25	1.25	1.25
April	1.25	1.00	1.25	1.25
May	1.00	1.00	1.25	1.25
June	1.00	.80	1.25	1.25
July	.80	.80	1.25	1.25
August	.80	.80	1.25	1.25
September	.80	.80	1.25	1.25
October	1.00	.80	1.25	1.25
November	1.25	1.00	1.25	1.25
December	1.25	1.25	1.25	1.25
Year	2.50	.80	1.25	1.25

Goose Creek Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.50	$2.00	$1.25	$1.25
February	1.50	1.25	1.25	1.25
March	1.25	1.25	1.25	1.25
April	1.25	1.00	1.25	1.25
May	1.25	1.00	1.25	1.25
June	1.00	.80	1.25	1.25
July	.80	.80	1.25	1.25
August	.80	.80	1.25	1.25
September	.80	.80	1.25	1.25
October	1.00	.80	1.25	1.25
November	1.25	1.00	1.25	1.25
December	1.25	1.25	1.25	1.25
Year	2.50	.80	1.25	1.25

Hull Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.50	$2.00	$1.25	$1.25
February	1.50	1.25	1.25	1.25
March	1.25	1.25	1.25	.80
April	1.25	1.00	1.25	.80
May	1.00	1.00	1.25	.80
June	1.00	.80	1.25	.80
July	.80	.80	1.25	.80
August	.80	.80	1.25	.80
September	.80	.80	1.25	.80
October	1.00	.80	1.25	.80
November	1.25	1.25	1.25	.80
December	1.25	1.25	1.25	.80
Year	2.50	.80	1.25	.80

Oil Springs (Canada) Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$4.20	$3.95	$2.95	$2.95
February	3.95	3.20	2.95	2.95
March	2.95	2.95	2.95	2.95
April	2.95	2.95	2.95	2.95
May	2.95	2.55	2.95	2.95
June	2.55	2.30	2.95	2.95
July	2.30	2.05	2.95	2.70
August	2.05	2.05	2.70	2.45
September	2.05	2.05	2.45	2.45
October	2.55	2.05	2.45	2.45
November	2.95	2.55	2.45	2.45
December	2.95	2.95	2.45	2.45
Year	4.20	2.05	2.95	2.45

Petrolia (Canada) Field

Per barrel

	1921. H.	1921. L.	1922. H.	1922. L.
January	$4.13	$3.88	$2.88	$2.88
February	3.88	3.13	2.88	2.88
March	2.88	2.88	2.88	2.88
April	2.88	2.88	2.88	2.88
May	2.88	2.48	2.88	2.88
June	2.48	2.23	2.88	2.88
July	2.23	1.98	2.88	2.63
August	1.98	1.98	2.63	2.38
September	1.98	1.98	2.38	2.38
October	2.48	1.98	2.38	2.38
November	2.88	2.48	2.38	2.38
December	2.88	2.88	2.38	2.38
Year	4.13	1.98	2.88	2.38

Refinery Quotations

(Tank Cars)

Gasoline and Naphtha

Pennsylvania

54 *Gravity, Naphtha*

Per gallon

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.22	$0.22	$0.14½	$0.14½
February	.22	.18½	.14¾	.14¼
March	.18½	.17½	.15½	.14¾
April	.17½	.17½	.16½	.15¼
May	.17½	.16	.19	.16½
June	.16	.16	.20¾	.20½
July	.15	.12½	.20¾	.19½
August	.12½	.12½	.19	.17
September	.12½	.12½	.16¾	.16½
October	.14½	.12½	.16¾	.15¾
November	.19	.14½	.15½	.14½
December	.15	.14½	.14½	.13
Year	.22	.12½	.20¾	.13

56 *Gravity, Naphtha*

Per gallon

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.23	$0.22¾	$0.16½	$0.15¾
February	.22¾	.19	.16	.15¾
March	.19	.18½	.16¼	.15¾
April	.20	.18½	.17	.15¾
May	.18½	.17½	.20	.16¾
June	.17½	.17½	.21½	.21
July	.17	.15	.22¼	.20
August	.16	.15	.19½	.19¼
September	.16	.16	.18½	.18
October	.17¼	.16	.18	.16¾
November	.19½	.17¼	.16½	.15½
December	.17½	.17	.15½	.14
Year	.23	.15	.22½	.14

60 *Gravity, S. R. Gasoline*

Per gallon

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.23½	$0.23¼	$0.18½	$0.17½
February	.23¾	.20	.17½	.17½
March	.20	.19	.17¾	.17½
April	.20¼	.19	.19	.17½
May	.20¼	.19	.22½	.19½
June	.20¼	.20¼	.23½	.23
July	.20	.16	.22½	.21
August	.16½	.16	.22	.21½
September	.17	.16½	.19½	.19½
October	.17½	.16½	.19½	.18
November	.21½	.17½	.17½	.16¾
December	.17½	.17	.16¾	.15
Year	.23½	.16	.23½	.15

68 *Gravity, S. R. Gasoline*

Per gallon

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.25½	$0.25½	$0.24½	$0.23½
February	.25½	.25	.24	.23½
March	.25	.23½	.24	.23½
April	.23½	.19	.24	.23½
May	.22½	.19	.25½	.23½
June	.22½	.22½	.26	.26
July	.22½	.21	.26	.26
August	.20	.17	.26	.26
September	.24½	.20	.25	.25
October	.25	.24½	.25	.24½
November	.27	.25	.24½	.23½
December	.25	.24½	.23½	.22
Year	.27	.17	.26	.22

Oklahoma

50@52, 450 *End Point, Naphtha*

Per gallon

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.18½	$0.17	$0.12½	$0.11½
February	.17	.13½	.12¾	.12
March	.13½	.13	.13¾	.12½
April	.16¾	.13½	.13¾	.13½
May	.13½	.13	.17¼	.15
June	.13½	.12	.17¼	.16½
July	.12	.10	.16¾	.14¼
August	.10	.10	.13¾	.13¼
September	.09½	.09	.13½	.12¼
October	.13	.09½	.11¾	.10½
November	.13	.12½	.10¾	.09¾
December	.12½	.11½	.10¼	.09¾
Year	.18½	.09	.17¼	.09¾

58@60, 437 *End Point, Gasoline*

Per gallon

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.21	$0.19½	$0.13½	$0.12½
February	.18	.16	.13¾	.13
March	.16	.15½	.15	.13½
April	.17¼	.16	.16¼	.14¾
May	.16	.15	.18¾	.16¼
June	.15	.14	.19	.18½
July	.13	.11½	.18½	.15
August	.11¾	.11¼	.15¾	.14¾
September	.11½	.11	.15	.13¾
October	.14	.11½	.13½	.11¾
November	.15	.14½	.11¾	.10¾
December	.14½	.12½	.11¾	.10¾
Year	.21	.11	.19	.10¾

60@62, 400 *End Point, Gasoline*

Per gallon

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.23	$0.21	$0.14	$0.13
February	.21	.16½	.15¾	.14
March	.17	.16	.16¾	.15½
April	.18½	.17	.18¾	.16¼
May	.17	.16	.21	.17¾
June	.16	.14	.21¾	.20¾
July	.14	.12¾	.21¾	.17
August	.14	.12½	.16¾	.15¾
September	.13	.12½	.17	.16½
October	.15½	.13	.17	.14
November	.16	.15½	.14¾	.13
December	.15½	.13	.14¼	.13¼
Year	.23	.12½	.21¼	.13

North Texas

56@58, 450 *End Point, Naphtha*

Per gallon

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.18½	$0.16½	$0.12½	$0.12
February	.16½	.13½	.13¼	.12
March	.13½	.13	.13¾	.13¼
April	.15	.13½	.15	.13¾
May	.13½	.12½	.19	.15½
June	.12½	.11	.18	.17½
July	.11	.10¾	.18	.14½
August	.10	.09½	.14½	.12½
September	.10	.09½	.13	.12½
October	.13½	.09¾	.13	.11¾
November	.14	.13½	.11¼	.10¼
December	.13½	.11	.10½	.10
Year	.18½	.09½	.19	.10

58@60, 450 *End Point, Gasoline*

Per gallon

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.19	$0.18	$0.13¼	$0.13
February	.18	.14	.13½	.13
March	.14	.14	.14¼	.13
April	.16	.14	.15¾	.14¼
May	.14	.13	.18¾	.16
June	.14	.13	.18¾	.18
July	.12	.11¼	.18½	.15½
August	.11	.10½	.14¾	.13
September	.10¾	.10	.13½	.13
October	.13	.10	.13¼	.12
November	.13	.11½	.11½	.10¾
December	.14½	.12½	.11	.10½
Year	.19	.10	.18¾	.10½

Pennsylvania

45, *Water White, Kerosene*

Per gallon

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.11½	$0.10	$0.07	$0.06
February	.11½	.11	.06	.05¾
March	.11	.07½	.05¾	.05¾
April	.07¾	.07½	.05¼	.05¼
May	.07½	.06½	.06	.05¼
June	.06½	.05½	.07½	.06¼
July	.05½	.05	.07½	.07
August	.04½	.04	.07	.07
September	.04½	.04	.08	.07
October	.08	.04½	.09½	.08½
November	.09¼	.08	.09¼	.08¼
December	.08	.07	.08¾	.08
Year	.11½	.04	.09½	.05¼

47, *Water White, Kerosene*

Per gallon

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.14	$0.11	$0.11	$0.09
February	.14	.13	.09	.09
March	.13	.09¾	.09	.09
April	.10	.09¾	.07¾	.07½
May	.09¾	.07½	.07¾	.07½
June	.08½	.07	.08¾	.08¼
July	.07	.06½	.09	.08½
August	.06½	.06½	.08¾	.08½
September	.06½	.06½	.09	.08½
October	.10½	.06½	.10½	.09⅝
November	.13	.10½	.10½	.10¼
December	.11	.10¼	.10	.09½
Year	.14	.06½	.11	.07½

Oklahoma

41@43, *Water White, Kerosene*

Per gallon

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.08	$0.08	$0.04½	$0.03½
February	.08	.06	.03⅝	.03¼
March	.07	.06	.03½	.03¾
April	.06	.03¾	.03½	.03¼
May	.03	.02½	.04½	.03⅜
June	.02	.02	.04½	.04
July	.02	.01¾	.04½	.03⅜
August	.01¾	.01½	.04½	.03¼
September	.02	.01½	.05¼	.04½
October	.04½	.02	.05¼	.07
November	.05½	.05	.05⅜	.04¾
December	.05	.04	.04⅝	.04½
Year	.08	.01⅛	.05¼	.03¼

North Texas

41@43, *Water White, Kerosene*

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.11	$0.08½	$0.04½	$0.04¼
February	.08½	.06½	.04¼	.03
March	.06½	.06½	.03½	.03
April	.06½	.03½	.03½	.03
May	.03½	.02½	.03⅜	.03¼
June	.02½	.02½	.04	.03½
July	.02	.01½	.04½	.03½
August	.01¾	.01½	.04⅝	.03¾
September	.01¾	.01½	.05	.04
October	.04½	.01½	.05¼	.04½
November	.05½	.04½	.05¼	.04¾
December	.04½	.04	.05¼	.04¾
Year	.11	.01½	.05¼	.03

Fuel and Gas Oils

Pennsylvania

36@40, *Fuel Oil*

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.08	$0.07¾	$0.05	$0.04½
February	.07½	.05	.04¼	.04
March	.05	.04¾	.04	.04
April	.05½	.04¾	.04½	.04
May	.04¾	.04¾	.04¾	.04½
June	.04¾	.04	.05⅛	.04⅞
July	.03½	.03	.05	.04⅞
August	.03½	.03	.06	.05½
September	.04	.03¼	.06	.06
October	.07	.04	.06¼	.06
November	.07	.07	.06	.05½
December	.07	.05	.05¾	.05½
Year	.08	.03	.06	.04

Oklahoma

24@26, *Fuel Oil*

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.85	$1.00	$0.85	$0.80
February	1.00	.70	.95	.80
March	.80	.70	.95	.85
April	1.00	.80	.90	.70
May	1.00	.80	1.00	.75
June	.80	.50	1.10	.95
July	.50	.50	1.10	1.00
August	.50	.45	1.10	1.05
September	.50	.45	1.20	1.10
October	1.15	.50	1.10	1.00
November	1.15	.90	1.05	.80
December	.90	.80	1.00	.90
Year	1.85	.45	1.20	.70

32@36, *Gas Oil*

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.05½	$0.04½	$0.02¾	$0.02½
February	.04½	.03¼	.03⅛	.02½
March	.03¼	.02½	.03⅛	.02⅝
April	.03	.02½	.03	.02¾
May	.02⅝	.02¼	.03¼	.02⅞
June	.02⅝	.02¼	.04	.03¼
July	.02¾	.02¾	.03½	.02½
August	.02	.01⅛	.03	.02½
September	.01⅝	.01⅛	.03¼	.02¾
October	.03¼	.01⅝	.03⅛	.02⅜
November	.03½	.03¼	.03	.02⅜
December	.03½	.02½	.02⅞	.02⅛
Year	.05½	.01⅛	.04	.02½

North Texas

24@26, *Fuel Oil*

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.70	$1.10	$0.90	$0.70
February	1.10	.90	.90	.70
March	.90	.90	.80	.70
April	.90	.90	.85	.70
May	.90	.50	.80	.70
June	.50	.50	.90	.70
July	.45	.40	.90	.75
August	.45	.40	1.15	.90
September	.45	.40	1.00	.90
October	1.15	.45	1.00	.90
November	1.15	.90	1.00	.85
December	.90	.70	.90	.85
Year	1.70	.40	1.15	.70

32@36, *Gas Oil*

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.06⅔	$0.05	$0.03	$0.02¾
February	.05	.04½	.03	.02¾
March	.04⅔	.04⅓	.02½	.02¾
April	.04½	.04½	.02¾	.02
May	.04½	.02	.02½	.02
June	.02	.02	.02¾	.02¼
July	.01½	.01½	.02¾	.02
August	.01½	.01⅛	.02½	.02
September	.01½	.01	.02¾	.02¼
October	.03½	.01½	.03	.02¼
November	.03½	.03	.03	.02¼
December	.03	.02¾	.03	.02½
Year	.06½	.01	.03	.02

Lubricating Oils

Pennsylvania

Neutral Oil

200 Vis., No. 3 Color

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.21	$0.21	$0.20	$0.19
February	.21	.21	.20½	.19
March	.19	.18½	.23	.20
April	.18½	.18½	.24	.22
May	.18½	.18½	.25	.23¾
June	.18	.15½	.27	.25½
July	.16	.15½	.27	.26½
August	.15½	.15½	.26½	.26½
September	.15½	.15½	.25½	.25½
October	.20	.15½	.25½	.25
November	.24	.20	.25	.23½
December	.20	.18	.23¾	.23¼
Year	.24	.15½	.27	.19

Cylinder Stock

600, Steam Refined

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.25	$0.24	$0.13¼	$0.10½
February	.24	.16	.13	.10½
March	.16	.15	.13	.11
April	.15	.13	.11	.10½
May	.13	.13	.13	.11
June	.10	.08½	.14	.13
July	.08½	.07	.14	.13
August	.06½	.05½	.13	.13
September	.07	.06	.12	.11½
October	.14	.07	.11½	.10½
November	.18	.14	.10½	.09½
December	.14	.13½	.10	.09½
Year	.25	.05½	.14	.09½

Oklahoma

Neutral Oil

200 Vis., No. 3 Color

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.26¼	$0.18	$0.13	$0.12
February	.18	.15	.13	.12
March	.15	.15	.13	.12
April	.15	.14	.13	.11
May	.14	.14	.13½	.12½
June	.14	.12½	.13	.12½
July	.12½	.11	.13	.11½
August	.11	.10½	.11½	.11¼
September	.10	.09½	.11½	.11¼
October	.13	.10	.11½	.11¼
November	.14	.13	.11½	.11
December	.13	.12	.12½	.11½
Year	.26¼	.09½	.13½	.11

South Texas

Neutral Oil

200 Vis., No. 3 Color

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.28¼	$0.22	$0.13½	$0.12
February	.22	.20	.13½	.11
March	.20	.17	.13½	.11
April	.17	.17	.14	.12
May	.18	.17	.13	.12
June	.18	.16	.13	.11
July	.15	.12	.13	.11
August	.12	.12	.13	.11
September	.12	.12	.13	.10½
October	.14	.12	.11½	.10⅛
November	.14	.13	.13	.11
December	.14	.12	.13	.12
Year	.28¼	.12	.14	.10½

Paraffin

Pennsylvania

122@124, *White, Crude, Scale*

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.05	$0.05	$0.02¾	$0.02¼
February	.04½	.03	.02¼	.02¼
March	.03	.03	.02⅝	.02¼
April	.03	.03½	.02½	.02¼
May	.03	.02½	.02½	.02½
June	.03	.02½	.02½	.02⅝
July	.03	.02½	.02¾	.02½
August	.02½	.02½	.02¾	.02½
September	.02	.01¼	.02½	.02½
October	.04	.02	.02¾	.02⅝
November	.04	.03½	.02¾	.02⅝
December	.03½	.02¼	.02¾	.02¾
Year	.05	.01¼	.02¾	.02¼

Oklahoma

122@124, *E. M. P., White, Crude, Scale*

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.04¾	$0.04½	$0.02½	$0.02
February	.04¼	.02½	.02½	.02
March	.02½	.02½	.02	.01⅞
April	.02⅜	.02½	.02	.01⅞
May	.02½	.02½	.02¼	.01⅞
June	.02½	.02	.02⅝	.02
July	.02	.02	.02⅝	.02
August	.02	.01½	.02⅝	.02
September	.01¾	.01½	.02½	.02
October	.03	.01⅝	.02⅛	.02
November	.03½	.03	.02⅛	.02
December	.03	.02	.02⅛	.02
Year	.04¾	.01½	.02½	.01¾

Petroleum Products in the Philippines

The petroleum market of the Philippines has felt severely the unfavorable business stagnation of the last few years, but there was some revival in the last few months of 1922, according to advice received by the Department of Commerce, owing to increased demand for local products and lowering of prices for imported articles. These developments have returned a fair amount of buying power to the population, so that the present year should inaugurate a period of better economic conditions.

No quantity returns for imports of petroleum products for 1922 are available to date, but from the published value of these through November and known quantities exported to these islands from the United States, quantities can be arrived at that are sufficiently accurate to show the trend of this market for the past year. An estimate based on these totals give the import of gasoline, benzine, naphtha and other light products as 7,000,000 gallons; kerosene or illuminating oil, 12,400,000 gallons, and lubricating oils, 1,100,000 gallons. These figures show a decided falling off when compared with the known quantities received during 1921, but this is rather to be expected when the lack of demand for most commodities during that period is considered.

Source of Imports

The customs returns for several years previous show a steady increase in the amount of crude imported, but as there are no refineries in the Philippines and as most of this oil is from the Dutch East Indies, it is evidently Tarakan crude which is used as fuel oil without refining. In 1913 the Dutch East Indies supplied 66 per cent. and practically all of the remainder came from the British East Indies. In 1919 the crude, with the exception of small amounts from British territory and the United States, originated in the Dutch colonies. During 1920 the United States came forward and supplied 54.8 per cent. against only 44.8 per cent. from the Dutch Indies, but the latter regained this market the following year when they furnished over 94 per cent.

Practically all the gasoline, benzine and naphtha consumed here comes from the United States. The actual percentages are:—1913, 80.9 per cent.; 1919, 93.2 per cent.; 1920, 85.5 per cent., and 1921, 83 per cent. The Dutch East Indies furnish the remainder. The kerosene or illuminating oil market is likewise supplied principally from America. In 1913 the percentage was 92.4 and 91.5 in 1921, while the intervening years show a similar proportion. The balance of the demand is made up by the Dutch colonies. Most of the lubricating oil used here also comes from America, although the Dutch product is gradually being introduced. This latter increased from nothing in 1913 to 9.7 per cent. of the total in 1921.

Consumption

The latest available returns show the Philippines to have a total population of slightly over 10,000,000. Using the average imports for 1918, 1919, 1920 and 1921, the yearly per capita consumption of the various petroleum products is:—Gasoline, benzine and naphtha, .94 gallons; kerosene or illuminating oil, 1.27 gallons, and lubricating oil, .18 gallons.

Market Prices

Quotations at the beginning of 1923 show American kerosene, P6 to P6.35 per cent; kerosene of the Asiatic Petroleum Co., P5.95; American motor gasoline, P9.40 wholesale and P9.90 retail per case; Asiatic motor gasoline, P10.20 to P11.20 per case retail; American aviation gasoline, P10.90 per case; Asiatic aviation gasoline, P12.20 per case retail; American motor gasoline ex-pump, P0.95 gallon, and Asiatic crude, P57.50 per metric ton.

Carbon Black by Electrical Cracking

The legislation in many States against the present method of producing carbon black by the incompiete combustion of natural gas, and the continually increasing demand for gas for other purposes, indicates that the supply of carbon black may gradually be decreased and that new methods for its production, utilizing a greater percentage of the carbon in the gas should be developed, states the Bureau of Mines in serial 2417.

In the course of the investigations of the effects on hydrocarbons of high voltage discharges, it was noted by the Bureau of Mines that under certain conditions natural gas could be decomposed and that carbon black could be produced. The effects of several types of electrical discharges on natural gas have, accordingly, been studied in order to find out the fundamental factors underlying the reactions and their possible influence in the recovery of a greater part of the carbon content of natural gas than is now possible. Present commercial plants using natural gas for the manufacture of carbon black recover from 0.8 to 1.5 pounds of carbon black per thousand cubic feet of gas consumed, or less than 5 per cent. of the total carbon in the gas. It should be noted, however, that the present methods involve heating the gas to incandescence by burning it as a luminous flame, and a considerable part of the gas is thus consumed as a source of heat. If this heat can be supplied from some other source, or if a more efficient method of applying the energy contained in part of the gas, to the decomposition of the rest of it, can be worked out, then a greater yield of carbon black per thousand cubic feet of gas can be expected.

A brief summary of the investigations so far conducted upon natural gas is contained in serial 2417, which may be obtained from the Bureau of Mines, Washington, D. C.

Dutch Petroleum Imports in 1922

Dutch imports of mineral oils in 1922 amounted to a total of 497,940 metric tons, valued at $15,377,080, as compared with 430,771 metric tons, valued at $19,859,692, during 1921, being, in fact, the largest in the history of the trade. The increase, according to Consul-General G. E. Anderson, Rotterdam, who made the report to the Bureau of Foreign and Domestic Commerce, was due mostly to the larger use of fuel oil but also included heavier imports of kerosene and most other products. The increased receipts of kerosene were almost entirely due to larger shipments from the United States, while the increased imports of fuel oil were principally from Mexico. Practically the entire trade has been handled by the same companies and the same countries during 1922 in the same proportion as in 1921 except that the Anglo-Persian oil interests have dropped out of the gasoline and benzine trade as a result of the expiration of the contract with the Royal Dutch interests under which the imports from the Persia fields were made.

The imports in detail for the past two years have been as follows (1 metric ton of gasoline or benzine equals approximately 359 gallons; of kerosene, 331 gallons, and of lubricating oil (312 gallons):—

Details of Imports

	Metric tons 1921.	Metric tons 1922.
Refined petroleum (illuminating oil)—		
Belgium	2,644	2,623
United States	130,005	156,598
Mexico	22,160	7,734
Canada	.....	3,163
Other countries	1,184	690
Totals	155,993	170,808
Fuel oil—		
United States	22,732	9,330
Mexico	122,290	174,556
Curacao	.....	11,361
Other countries	7,464	8,598
Totals	152,486	203,845
Benzine—		
Belgium	4,181	4,070
United States	4,724	10,735
Dutch East Indies	12,726	17,051
Persia	15,000	.....
British India	.....	7,700
Mexico	1,970	7,250
Other countries	1,161	80
Totals	38,862	46,886
Gasoline—		
Belgium	3,389	4,279
Great Britain	1,916	.....
United States	38,787	45,538
Dutch East Indies	.....	.....
Mexico	6,273	.....
Other countries	2,436	989
Totals	52,801	50,806
Petroleum Distillate and Crude Oil—		
Germany	.....	108
Great Britain	214	28
United States	260	288
Mexico	10,635	.....
Poland	.....	281
Other countries	142	135
Totals	11,251	840
Lubricating Oil—		
Germany	.....	3,021
Belgium	6,482	10,445
United States	11,330	10,256
Other countries	1,566	1,033
Totals	19,378	24,755
Paraffin—		
Belgium	127	.....
Great Britain	380	418
United States	678	1,105
Dutch East Indies	1,088	314
Other countries	142	181
Totals	2,415	2,018
Grand totals	433,186	499,958

Although the trade in mineral oils in Holland is more or less competitive, an analysis of the import returns indicates a general balancing of interests in this market. On the whole American oil companies operating in Holland have made some gains which are chiefly reflected in the increased imports of American kerosene and gasoline. The independent Dutch companies including the Petroleum Handelmaatschappij of Utrecht and the Olex Co. of Zaandam, and the independent British company (the Lianosoff White Oil Co. of Amsterdam) have also used more American oil. The Royal Dutch-Shell group appears to be losing some of its trade in the Dutch market as a result of conditions in the Dutch East Indies and Mexico whence it derives most of its supplies.

The export trade which in practical consumption effect consists of the sale of fuel oil for vessels in Holland showed considerable increase in line with the increased imports. The bunker oil disposed of for foreign ships in Dutch harbors amounted to 23,630 metric tons as compared with 22,141 metric tons in 1921. The use of fuel oil for Dutch ships increased from 58,061 metric tons in 1911 to 83,730 metric tons in 1922. Of the sales to foreign ships British vessels took 10,702 metric tons, American vessels, 6,625 metric tons; Spanish vessels, 2,104 metric tons; Norwegian vessels, 1,539 tons, and Belgian vessels, 1,038 tons. The actual export of fuel oil amounted to 14,122 tons, of which 14,081 tons went to Belgium. Other exports included 3,010 tons of gasoline and benzine, as compared with 2,211 tons in 1921, 410 tons of lubricating oil compared with 440 tons in 1921 and 685 tons of paraffin as compared with 695 tons in 1921.

Saturation Point Reached

It is problematical whether the total importation of mineral oils into the Netherlands will be further increased. The demand for kerosene has probably nearly reached a limit, as the imports in 1922 have exceeded those of 1913 which were 170,113 metric tons and under ordinary conditions it is unlikely that they will become any greater since the use of kerosene for illuminating purposes is on the wane and little is used as fuel. On the other hand the use of gasoline and benzine is growing and this growth is likely to continue indefinitely, especially as the number of cheap motor cars in use is greatly on the increase. Petroleum distillate and crude oil are dropping out of use. Lubricating oil sales depend largely upon the volume of shipping entering Dutch ports, although of course the demand for it on the railways and in the industries, which is also large depends upon general prosperity. Imports of fuel oil will doubtless expand in proportion to the increasing use of oil as steamship fuel.

Aside from the changes in the volume of the trade above noted the year's record has been remarkably devoid of incident. Prices have followed those in the United States, Mexico and the Dutch East Indies in the respective lines furnished from each of these sources.

Czechoslovak Petroleum Industry

The year 1922 proved very unfavorable to the petroleum industry of Czechoslovakia, says H. Laurence Groves, Trade Commissioner, Prague, in a report to the Bureau of Foreign and Domestic Commerce. The general industrial depression affected the sale of all mineral oil products, and because the supply much exceeded the demand, prices declined rapidly. Prices of the principal petroleum products at the end of 1922, expressed in Czechoslovakia currency, showed a general reduction of more than 50 per cent. from those prevailing at the close of 1921. Kerosene prices declined 47 per cent., gasoline and gas oil about 50 per cent. and lubricating oils and paraffin wax approximately 60 per cent. during the year. However, it is to be noted that the exchange value of the Czechoslovak crown appreciated materially during 1922, so that prices of these products, expressed in terms of the dollar, showed but little change.

Imports of petroleum products during 1922 were considerably below those for the preceding year, the total for the first eleven months of 1922 amounting to 85,124 metric tons as compared with 104,257 tons during the entire year 1921.

Drugs and Fine Chemicals: Market Review

Fine chemicals and drugs were for the most part steady materials throughout 1922. Viewing the year as a whole, it can be asserted that business improved almost constantly throughout the period. Early in the year affairs were rather dull; indeed until the last quarter buying failed to pass much beyond the limits of moderate proportions. From October through December, however, there was a marked gain in transactions, and values as a whole showed an upward trend. The close of the year found the market in firm position, but, of course, subject to the usual year-end dullness incident to the inventory period.

The Reporter's index number provides a means of illustrating market trend throughout the year. The number is compiled weekly from a group of 35 drugs, fine chemicals, and raw materials. The articles chosen are thoroughly representative of the market and rather accurately reflect the general trend and sentiment of the market.

Below is a tabulation showing the index number on the first of each month:—

Index Numbers

(35 Representative Materials)
Normal—136

	1922.	1921.
January	153	201.2
February	152.1	199.5
March	149.9	187.2
April	152	176.9
May	152	170.4
June	150.1	166.6
July	150.8	163.1
August	148.4	161
September	155	155.6
October	162.4	152.7
November	167.1	151.7
December 1	176	151
December 31	178.6	154.2

A study of the presentation above reveals two important facts: (1) The consistent downward movement of the index in 1921 as compared with the limited fluctuations of the numbers and the more or less steady character of the market from January through August in 1922; (2) the sharp rise in the index during the period October to December in 1922.

The first quarter of the year was rather disappointing to the manufacturing and selling trade. The downward trend of prices and the pressure of poor business that was the governing feature of the market in 1921 had by no means worked itself out. This psychology of trade was a part of the adverse balance that carried over into 1922 and throughout the first quarter of the year kept prices under pressure.

During the first three months price conditions in important articles show the following situation:—Advances, 7; declines, 14; without change, 19.

The second quarter of the year found the market improved as a whole. For the most part the price trend was upward, and this was particularly true of April and May. In June, with the approach of summer dullness, there was an easier tendency noted. This tendency was all the more accentuated by the fact that resellers began to scalp the market more vigorously. Sales of excess stocks were held by the government, and this supplied the resellers with stocks of standard merchandise in quantities and at prices that permitted them to undersell the manufacturers. During April, May and June price movements in important materials were as follows:—Advances, 18; declines, 10; without change, 12.

The third quarter of the year witnessed the development of those conditions noted as prevalent in the second. July and August were months of quiet business, in which prices were still generally inclined toward lower levels. However, a sharp recovery was experienced in September. It may well be that the passage of the tariff act of 1922 on September 21 had something to do with this revival of price movements on a more liberal scale. In any event, several items were scheduled for higher duties and prices were promptly advanced when the act went into effect. The predominating trend in prices was upward in that month, as may be understood from the following statement of price conditions in important items:—Advances, 23; declines, 5; without change, 11.

The fourth quarter of the year found prices moving strongly toward higher positions. There was better business, more buying, higher prices and expanding demand throughout October, November and December. Important items show the following situation as to price conditions:—Advances, 28; declines, 5; without change, 6.

Study of Individual Products

A detailed and specific individual study of important articles follows. The list might be amplified considerably without adding measurably to the understanding of market conditions which the following will give:—

Acetanilide opened the year with conditions propitious for a rise. Raw material showed a firmer trend and there was rather less resale goods in the market. The advance came in February, making the market 32c. per pound. March found the market still firm and goods sold at 32½c. per pound. That development ended the rising market. From April to September there was a downward movement in prices. The high for this period was 31c. and the low 28c. per pound. In October the stronger position of raw material asserted itself and the market entered on a period of control that centered for the most part in manufacturing quarters. Quotations rose from 28c. to 35c. per pound, closing at the high for the year. In December resellers were able to offer small quantities only and shaded the manufacturers' prices by 1c., naming 34c. per pound, but did not have enough goods to make the market at that figure.

Acetphenetidin passed through a rather uneventful year. But one price change was made, that being an advance that followed the absorption of all resale goods. The first quarter of the year found prices unchanged at $1.65 per pound, a figure established in October, 1921. In May manufacturers advanced to $1.85 per pound, which quotation continued throughout the balance of the year. Late in the year there were rumors of a pending advance, due to the costs of production being higher.

In the Alcohol Group

Alcohols were rather under pressure in the first quarter. Methanol (wood alcohol) declined from 57c. per gallon to 50c. during January and February. In March a moderate recovery brought prices to 54c. per gallon, only to be followed in April by a decline of 2c. to 52c. per gallon. That price continued to be the market until September. There was practically no demand for the article during the summer, and production was steadily reduced by the crude plants. At least 80 per cent. of them were closed down at one time during the summer months, and producers feared to open them up even to get the larger supplies of charcoal for which there existed an excellent demand.

In September came the first of a series, of advances that featured this article for the balance of the year. The higher prices were the direct result of scarcity of the article. With production shut down consumption had been satisfied from the existing stocks. September found them at a low ebb and better demand caught sellers short of material. In September prices advanced from 52c. to 64c. per gallon; in October, 64c. to 88c.; in November, 88c. to 98c.; in December, 98c. to $1.13 per gallon, this being the high for the year. The low was 50c.

The history of denatured parallels that of methanol fairly close. During the period of January-April prices dropped under pressure of liberal offerings and poor takings. Opening at 40c. per gallon, completely No. 5 dropped to 25c. in April. From that month on until the end of the year steady improvement was witnessed. One of the largest producers of the article went through a reorganization of its New York sales office and, apparently without connection with the event, when the new sales division got into the saddle prices began to move up. There were reports of heavy contracting for deliveries of anti-freeze alcohol that gave promise of a large fall business in order that dealers might be well prepared to meet consuming requirements during the cold months

Leading producers during the April-December period declared that production had been raised each month and was at last brought well abreast of the pre-war output. Beginning May at 28c. per gallon, the prices advanced to 31c. in June; to 32c. in July; to 34c. in August; to 36c. in September, which price prevailed in October also. November saw the advance resumed, and 38c. per gallon was reached. This was the December price also and proved to be within 2c. of the high for the year, which was 40c, ruling in early January. Of course, the strength displayed by alcohols — especially methanol — strengthened the market for the derivatives.

An interesting example of a raw material strengthening and advancing the market of a derivative is found in aspirin, or acetylsalicylic acid—the raw material being phenol. The first quarter found prices on acid varying between 75c. and 70c. per pound. The article was under the influence of resale offerings of standard brands that came into the market in quantities sufficiently large to make competition exceptionally severe for the makers. April found the market on a firmer basis

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with prices ranging between the extremes of 76c. and 78c. per pound. Reaction came in May and June, as the result of the competition aforementioned and prices dropped back to a low of 73c. per pound. That ended the reactionary course of values.

The strength of phenol followed the cleaning up of the government surplus. Manufacturers of aspirin almost at once advanced prices and assumed control of the market for the reason that resale stocks were comparatively small. In August prices advanced to 85c., that ruled also for September. In October another raise brought the market to 95c., only to have November come in with a raise to $1 per pound, which price prevailed to the end of the year. The series of advances named by the producers developed something of a quarrel between the various makers. Not all advances were made unanimous, there being some makers who, on occasions, delayed advancing prices only to make the rise later on. The close of the market was very steady, although raw material was less strongly placed.

Bismuth subnitrate was a strong article for the entire twelve months. In the first four months, prices hung firm at $2 per pound, with $1.75 per pound being the low for that period. May found prices up 15c., $2.15 per pound becoming the market, at which level prices ruled until September, when they again went higher, this time to $2.30 per pound. Another rise in September made the market $2.45 per pound. October saw the movement continue when $2.65 per pound was established to prevail for the balance of the year. The strength in bismuth subnitrate was, of course, related directly to the cost of bismuth metal. This advanced steadily throughout the year because of real shortage of this article in the London market. Scarcity of metal was an outstanding feature of the year, second only to the steady rise in sterling exchange that began the year at $4.30¾ to the pound and ended at $4.63¾ to the pound sterling; the high was $4.65, reached toward the end of December. This rise in sterling, plus scarcity of metal, raised replacement costs of bismuth metal and accounted for the advancing market on the bismuth preparations.

Caffeine alkaloid was an article rather steadily under depression for the better part of nine months. Opening the year at $4.25 per pound, the declines were progressive throughout the period January-July. In the latter month values were down as low as $3.50 per pound and sales actually were made at $3.25 per pound. July, August and September found $3.50 an unchanged price. The new tariff, signed on September 21, gave relief to the American makers of this article. The declines named during the first nine months had been directly attributable to the fierce competition offered by imported goods. The 1922 tariff scheduled a heavy duty on this article, being dutied at $1.50 per pound in place of $1 per pound as tariffed in the 1913 act. The effect on the market was immediate and far reaching. Importation was made profitably impossible by the high duty and control of the market passed to the American producers. They advanced prices conservatively to $3.75 per pound in October, and held that price for the balance of the year. However, toward the close there were very persistent rumors circulated in the market to the effect that makers were contemplating another advance.

Chloroform Felt Resale Pressure

Chloroform was adversely affected by the offering of resale goods throughout the year. The fact that several large quantities of the resold goods secured from the government were seized by government officers as unfit for use did not operate especially in favor of the producers. They were consistently up against the most driving competition during the year. However, toward the close, there seemed to be a firmer trend in the market, owing to the lessened amounts of resale goods then offered. The first quarter of the year held prices unchanged at 37c. per pound. In April resale goods drove prices down to 33c. per pound, although producers continued to name 37c. per pound.

In May the market dropped to 27c and in June it was down to 25c per pound, at which figure it stayed until October, when a rise to 35c per pound occurred coincident with a lessening of resale material. For the last quarter of the year the price was unchanged, although small lots of resale goods continued to come out at 32c per pound.

Cream of tartar divided the year fairly evenly into two parts. The first six months was a period in which imported goods came into the market in quantities large enough to send prices down. Manufacturers reduced their quotations from 30c. on January 1 to 26½c., the revision being made late in January. That price continued for the balance of the year. In the meantime resale goods came into the market at 23½c. per pound in January and the article sold as low as 23c., at which price sales were made during May, June, July and August. Higher production costs abroad sent spot prices up in September, when 24c. per pound was established. In November, 26½c. per pound was the market, but the year closed at 25c per pound, steady and well supported by a good demand. The outlook for 1923 was good, as there was a bumper wine crop abroad that reduced the price of wines and caused wine makers to scrape the vats for the argols on which they depend for a by-product when wine is cheap.

Cocaine opened the year at $6.25 per ounce, not especially steady, as there was considerable competition between the various makers. This competition resulted in a reduction of prices to $6 per ounce in March, and that figure provided the basis for the market until September, when values were advanced to $7 per ounce. The decline, however, was not particularly close in its relation to supply and demand, but smacked of inter-company warfare. Attempts were latterly made to raise quotations above $7 per ounce, one house actually going to $8 per ounce at one time, but reducing prices quietly when it later found that the remaining producers did not look on the rise with approval.

Epsom salt was directly affected by the higher import duties that were assessed under the 1922 act. Prices on U.S.P. goods early in the year were $2.50 per hundred pounds. In May, a drop to $2 per hundred was caused by the plentiful offerings of imported goods that could not always compare favorably in quality with the product of domestic makers. The latter put through a successful petition to the Congress looking for relief. The duty was raised from 1-10c. per pound to ½c. per pound, and resulted in the market advancing to $2.25 per hundred in November. It closed at that figure.

Formaldehyde—one of the methanol derivatives—followed closely the trend in raw material throughout the year. During the first eight months of the year there was a downward drift to prices that brought the market from 10½c. per pound in January to 8c. in August. Coincident with the sharp rise in methanol (wood alcohol) that occurred in September, formaldehyde was advanced by makers to 10c. October witnessed a further rise to 12¾c., November to 13½c. and December to 16c. per pound, which was high for the year. During the rise much was heard of scarcity of the article as compared with the reports of excess stocks earlier in the year. It must be confessed that there was plenty of resale goods in the market during the first eight months; it must also be asserted that resale goods seemed to dry up when the series of advances were made by the producers. However, with the turn of the year there were noted again some resale offerings, 15½c. per pound being the price.

Glycerin and Government Stocks

C. P. Glycerin was another article affected by the marketing of large quantities of government excess stocks. Of course, refiners always more or less keep prices of C. P. in line with the cost of dynamite glycerin and crude glycerin as well. But the resale stuff was offered in such quantities that at times the refiners were forced to recognize the competition and meet it. The drift of prices during the period of January-June is indicative. Opening the year at 16½c. per pound, in drums, the market held thereat for the next two months. Late in March a reduction to 15½c. per pound was made and by June the mark had dropped to 14¾c. per pound. During this period of January through June dynamite glycerin declined from 15¼c. per pound to 12½c. per pound, with June business taken at 13¼c. to 13½c. per pound.

Soaplye crude opened the year at 10¼c. per pound and declined to 8c. per pound in late February. It remained at that figure until June, when values advanced to 9c. per pound.

Beginning with July, the C. P. market showed signs of recovery and prices were advanced to 16c. per pound. August brought the market to 17c., September 18c. and in October 18½c. per pound was established, to continue throughout the balance of the year. In August and September there was a fluctuation between 15c. and 17¼c. per pound, showing the market at that time to be of slightly irregular trend.

Dynamite glycerin opened July at 13½c. per pound, but soon advanced to 15c. per pound. In September sales were made at 18c. per pound which proved to be the high for the year. During October, November and December the trend of values was downward, the decline being from 17¾c. in October to 16½c. per pound in December.

The trend in dynamite glycerin was directly due to the movement in soaplye during the second semester of the year. In July soaplye sold at 9c. per pound and advanced to 10c. August saw the market up to 10¾c. per pound and in September it advanced further to 12c. per pound. During October it fluctuated between 11c. and 12c. per pound. November saw a weaker market owing to the larger offerings of foreign crude, the profitable purchases of which had been made by the declines in exchange. Prices dropped to 11c. per pound and the movement continued right to the end of the year, when 10½c. per pound was the market.

At all times during the year was the large stock of crude held by a large soap maker a potential menace to crude prices. While the holder was said to have firm ideas and to be willing to hold, the fact that 500 or 600 cars of crude were stored up gave rise to apprehension as to what might happen if he got tired of storing his stock. Later, he did sell a large quantity at favorable prices to the powder makers and that contributed to the easier trend in crude toward the end of the year. However, market sentiment in December was rather evenly divided between the bull and bear aspects of the market. Domestic producers of crude were not offering liberally, but there was a distinct gain in the offerings from abroad. It was considered to be a fact of much significance that refiners held prices on C. P., unchanged at 18½c. per pound during the time when dynamite declined from 18c. to 16½c. and when crude moved down from 12c. to 10½c. per pound.

Crude iodine was a strong and advancing item throughout the year for the sole reason that British exchange was on the advance steadily throughout the year. The January opening price of sterling was $4.20¾; the December close, $4.63¾ with $4.65 paid for sterling late in December. Naturally, the higher exchange caused crude iodine to advance. There was real scarcity of the article in Japan and to eke out her domestic production Japanese importers were buyers from the British syndicate controling the sale of crude iodine.

This gave the iodine preparations a strong tone throughout the year. Prices advanced steadily. For example, potash iodine opened in January at $2.85 and advanced to $2.90 before the end of that month. In February a rise to $3.15 per pound took place and that price continued until May, when the market became $3.30 per pound. In September a further rise to $3.45 per pound took place, and in December the high for the year was reached when the market was made $3.60 per pound. A similar trend was noted in resublimed iodine that advanced from $3.80 per pound in January to $4.50 per pound in December. During the year, crude iodine prices offered in the New York market advanced from $3.66 per pound on January 1 to $4.04 on December 31.

Menthol a Strong Item

Menthol was another article that showed mostly advances and very few declines during the entire year. It opened in January at $5.25 per pound; it closed December 31 at $10.50 per pound. Barring a slight weakness in May-June when prices declined from $6.25 per pound to $5.40 per pound, there was never a week throughout the year in which the trend was not upward.

The most important part of the year came in the last four months of the twelve-month period. In September goods were sold at $6.15 per pound. Almost overnight, the market shot up to $8 per pound late in October, although there was a reaction to $7 per pound, at which a legitimate market was established. The upward pinch of prices came as the result of scarcity in New York. This caused numerous small orders and inquiries to be cabled to Japan with the result that shipment prices were raised by the Japanese factors. Importers here had determined that they could outwait the Japanese and until as late as September 1 were convinced that eventually the Japanese factors would be forced to unload their thought-to-be large supplies. The Japanese, on the other hand, simply waited until necessity drove American buyers into their arms. When they came, they were greeted with stiff advances in prices that resulted in some importers paying as high as $9.50 per pound in bond for shipment material during the month of November.

To the credit of the leading importers be is said that they resisted as long as possible the speculative element's drive to make the sky the limits as far as spot prices went. There was never a time that the principal importers did not have a few cases of menthol on hand to sell at prices comparatively reasonable, as compared with what the speculators had in mind. Eventually, however, this good intention went by the board when expected arrivals of menthol were badly delayed. Much needed material arrived on the Pacific Coast where it was lost. When found and put on the cars it got lost again in transit, only to be found in some one of 1,000 freight cars in the Staten Island freight yards. Of course, some stuff was brought on by express from the Coast and the importers stood the expense of that transport in many instances—this being their contribution to the welfare of the consuming trade.

The delay on shipments caused a bare spot market as far as the largest importers were concerned. In stepped the speculators, and during November and December they drove the New York market from $7 per pound to $10.50 per pound.

With the turn of the year, a new order of things came about. The Japanese refiners depressed their market in order to get crude oil at cheaper prices. Offerings of crystals came to New York at lower prices also. The principal importers had a fair stock of goods on hand when the "lost was found," and they promptly threw the gaff into the importers, driving spot prices down to $8 per pound. When that figure was reached it seemed as though the next move would depend on the plans of the importers. Replacement cables named as low as $7.20 per pound in bond and as high as $7.50 per pound in bond. Many believed that the downward movement was stopped and that a reaction upward in Japan and on spot might be not unlikely.

Mercurial preparations were strong throughout the year. The strength was manifested mostly in the hard mercurials, these advancing steadily. Soft mercurials at least held without change, there being one advance made in the third quarter of the year.

Quicksilver Was Active

The strength of this market was directly related to the situation in quicksilver. Metal opened the year at $48 per flask, advanced almost at once to $52 per flask, and by April had reached $55 per flask. Of course, from week to week there were minor turns upward and downward in prices, but in the main the drift was distinctly toward higher levels.

In August-September the big fireworks were set off coincident with the passage and signing of the tariff act of 1922. That instrument made the duty on metal 25c. per pound, or $18.75 per flask. The former tariff scheduled a duty of 10 per cent ad valorem. In order to prevent foreign makers of mercurial preparations from entering the market here with low cost goods, a compensating duty was also placed on mercurials imported.

Prices in August opened up at $57 per flask and by the end of the month were advanced to $60 per flask owing to the pending higher duties. There was a demand for metal in bond under the 10 per cent. tariff of 1913, and this gave rise to a good business just prior to the signing of the act of 1922. The new tariff went into effect on September 21 and by the end of that month the market was up to $69 per flask. October began at $71 per flask, and by the end of the year the market had advanced to $74 per flask.

In the meantime, hard mercurials had been active. For example, calomel was priced at 82c. per pound in January; advanced to 88c. in February; held at that price until May, when the market again advanced, this time to 94c. For May, June and July that price stood. In August, $1 per pound was reached; in September it rose to $1.15 per pound. October and November found prices held at $1.15 per pound, but in December the makers advanced again to $1.25 per pound, the high for the year.

While prices were thus advancing on metal and derivatives, conditions abroad were making for a turn of events that promised lower prices in the future. Spanish and Italian producers began commercial warfare that resulted in a sharp increase in Spanish production. The Spanish marketing body reduced prices at the mines and the figures named resulted in Spanish metal again becoming a possibility for shipment to the United States. Right here, for the sake of historical account, it may be said that the Rothschild lease on the Spanish mines expired during the year and the Spanish government took over the mines and made preparations not only to mine the ore but also to market the extracted metal.

This turn in events had an adverse influence on price trend abroad and abrogated to some extent at least the protection of the higher tariff duties. It had been supposed that 25c. per pound duty would allow the American mines to open again and produce metal at a profit. It had been alleged during tariff hearings that metal in this country could not be mined profitably and sold for less than $75 per flask. When the market reached that point there were rumors of a resumption in mining operations in the west, but the trend of affairs in Spain and Italy gave little promise of the American miners being able to operate freely for some time to come.

Opiates Were Quiet

Opium and the opium derivatives passed through a relatively unimportant year as far as price developments went. The changes in opium quotations came in the first, second and third quarters, while morphine and codeine prices were held unchanged until the last quarter of the year. Interest in narcotics really centered on political developments at Smyrna and the passage of restrictive legislation at Washington looking to the closer control of narcotic traffic, both legitimate and illegitimate.

Opium opened the year at $5.50 per pound and in February prices were raised to $5.75 per pound. In May another 25c. rise brought selling prices to $6 per pound. In September two advances were made, the first being 25c. and the second 50c., and thus was the basis of $6.75 per pound established. It continued through the balance of the year.

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WORKS AND LABORATORIES, BOROUGH OF BROOKLYN, NEW YORK

In former times, such a series of advances in raw material would have produced corresponding movements in codeine and morphine sulphate, and in the other opium derivatives as well. It failed to show last year.

Morphine sulphate in January was quoted $4.90 per ounce. This figure continued until September, when an advance was made to $5.35 per ounce. Codeine in January was priced at $4.80 per ounce; in September makers advanced to $5.85 per ounce. Both codeine and morphine continued for the rest of the year at the levels established during September. At no time during the year did demand exceed moderate proportion as far as legitimate selling was concerned. In fact, the conservative character of request and the failure of manufacturers to advance derivatives coincident with the higher spot price for gum opium was believed by some to indicate that producers' quotations had been all out of line with the cost of opium. It was believed that prices had been too high if producers could profitably hold prices on derivatives unchanged during the months that opium advanced $1.25 per pound.

So much for the local market. The developments at Smyrna were, of course, of direct influence on the supplies of opium from that market to the world. Following the occupation by the Turkish forces, trade in raw material was interrupted and for a time at least all communication was cut off. Eventually the selling market was shifted to Constantinople. One very significant fact developed at Smyrna and Constantinople during the year was the growth of Japanese buying there.

This business was done in two ways:—First, there were the direct purchases made in the open market for shipment direct to Japan without any camouflage; second, there were the indirect shipments into Russia and across Siberia until the stuff could be marketed from the Far Eastern ports along the Japan Sea and the East China Sea. Of course, when the derivatives had been manufactured from this opium, most of them found their way into China. Japan is the largest manufacturer of narcotics in the Far East.

Narcotic Imports Restricted

Passage of restrictive legislation in the form of an amendment to the Harrison act contributed considerably to the concern that manufacturers experienced when the amendment was proposed. On May 26, 1922, President Harding signed the Miller-Jones amendment. This instrument created a Federal Narcotic Board consisting of the Secretaries of the State, Treasury and Commerce departments. The intent of the bill was to restrict importations of narcotics in all forms to the legitimate manufacturing and consuming needs of this country. As a general thing it looked to the virtual abolition of export business in all its phases save as the board might grant occasional license for export in cases where the need of narcotics was clearly demonstrated. The board was constituted the sole body from which authority to import or export crude opium and coca leaves might be obtained. It was intended to reduce all imports of crude opium and coca leaves to limits dictated by the actual consuming needs of this country. Importation of anything but crude narcotics was prohibited. The measure was far reaching in its effect, especially as it put under closer restriction the export business of domestic producers to Mexico and similar countries that are dependent on this country, England or Germany for their supplies of cocaine, codeine and morphine. Naturally, the measure was fought vigorously by the producers, who maintained a strong lobby against the measure and who solicited and obtained the support of some prominent trade organizations. It was all in vain; the measure passed both houses and was signed by the President.

The full effect of the measure—or, rather, a concrete instance of the powers given the committee by the act—came after the turn of the year. Some time shortly after January 1 an order prohibiting further importations of opium and coca leaves was issued by the board. This order was to stand until such time as the board received a report on the actual requirements of this country and checked them against the existing supply of unmanufactured raw materials. In other words, the existing supply was believed to be sufficiently large to meet needs and hence the gate was shut against further importations.

This restrictive legislation, added to the already restrictive Harrison act, with its various amendments each in themselves adding to the restrictive and control clauses of the original measure utterly removed opium, cocaine, morphine nnd codeine from the class of speculative materials. It seemed probable that the work of control would go ahead until production of derivatives in this country was reduced to the medicinal requirements of this and dependent nations.

Quinine Shortage Developed

Quinine was also an article that has been rather free from manipulation and speculative activity during the past year. The year opened at 60c. per ounce, named by the domestic producers. In June the price was dropped to 50c. per ounce and the market remained at that position for the balance of the year.

The feature of the market was the shortage in goods that developed during the middle of the year. This shortage was due to two causes. First, the failure of demand earlier in the year had caused producers to practically shut down on all production. They have stacked up a large supply of manufactured goods for which there was but a poor market. Hence, they reduced production to small proportions and, in one instance at least, closed down the quinine plant entirely.

Almost without warning a strong demand sprang up. There was a heavy domestic requirement for bi-sulphate for use as a denaturant in alcohol formulas. There also developed huge orders for sulphate on account of the various relief committees, such as the Russian, Near East, and others. This business alone was sufficient to make a large hole in the accumulated surplus that a short time before had worried producers into shutting down on further production. In addition to the two sources of sudden demand was a growth in export requirements that came along coincident with the others.

The larger demand caught the market short of raw material. Ample supplies of bark had been purchased in Amsterdam (the regular auctions were resumed in 1922), but for some reason or other shipment of the material was held up, held back or delayed. When the quinine plants were again put into operation raw material shortage prevented running at the peak of capacity.

The net result was that the producers in this country were forced to put their domestic consumers on a ration basis. There were constant deliveries being made, but, for example, the consumer ordering 1,000 ounces received it in three shipments, each amounting to a third of the entire amount.

Late in the year the situation righted itself following the arrival of liberal quantities of raw material and the decrease in pressing demands for extremely large quantities. It is a significant fact that at no time during the shortage did a speculative element spring up on spot. Japanese quinine continued to come in to the market, but not in quantities sufficient to feed the speculators with supplies. Dutch sulphate superseded the direct shipments from Java, but the local agents adhered to the American schedule, apparently. The close of the year was very quiet with a slight tendency noted toward lower prices on Japanese goods, which find limited favor among the consumers in this country.

Santonine proved to be an article capable of almost unlimited price advance during the past year. The rise amounted to $25 per pound. In January, the price for crystals was $147 per pound; in March it rose to $167; in September the last advance for the year placed the article at $172 per pound.

The advances were due to a multiplicity of causes. Early in the year it was the rise of Swiss exchange that caused headquarters to advance quotations. Later a large quantity of badly needed stuff was lost in a shipwreck in the North Sea. At all times it was hard enough to get sufficient supplies from the Russian monopoly, but the loss of this large quantity proved another reason for another advance, and it came promptly on spot coincident with a rise in London. Advancing sterling exchange was a third cause for the strong situation. British exchange advanced from $4.20¾ to the pound in January to $4.63¾ in December. As santonine must be paid for in sterling, the advance naturally increased the landed costs of replacement supplies. Attempts to get the Russian monopoly to accept lower prices in view of the higher sterling exchange failed utterly. In fact, the views of the Russians were all in favor of raising their prices. Hence, headquarters again found adequate reason for raising spot prices to a point covering the increase in replacement costs. Naturally, the extremely high prices acted as a brake on consumption to a considerable extent, but not in a degree likely to affect the price trend for some time to come.

Such is a brief history of important commodities in the drug and fine chemical market during 1922. On the whole, producers were fairly well satisfied with the progress of affairs during the year, especially in the last quarter when business improved, prices began to show a profit on sales, and tariff protection granted producers of certain lines relief from ruinous foreign competition, principally from Germany. It was felt that 1923 would see a continuation of the improvement began in the final quarter of the year that has been reviewed.

Cinchona and Quinine in Great Britain in 1922

LONDON, March 1, 1923.

The only change in the official price of sulphate of quinine during the past year was made in June, when it was reduced from 3s. to 2s. 3d. per ounce. The change coincided with a temporary, firmer tendency in this country, where, in May, values had almost reached the official price of 3s., and also with the expected consent of previously wavering Java cinchona planters to continue their adherence to the cinchona convention and to abandon the idea of erecting a new quinine factory of their own in Java. The principal motive for the official reduction may have been furnished by the further encroachment upon the quinine markets of the world by the Japanese quinine works, which, however, has continued to offer and sell just below syndicate prices. Quinine has long ceased to be of interest to Mincing lane, and even dealers in fine chemicals now have few transactions in quinine on their books. What trade there is is thus probably in the hands of the members of the British Quinine Corporation, whose contract with the Dutch group is reported to have been dissolved on the former undertaking not to undersell the Dutch makers. Stocks in corporation hands resulting from the Dutch contractual apportionments are no doubt still ample, and the relief felt by the dispensation from having to add to them ad infinitum must be considerable.

America alone has enjoyed a somewhat active market (during the latter half of the year), the demand being greatly helped by the admission of quinine bisulphate, as well as certain secondary cinchona alkaloids, as denaturants of alcohol. Although imports of bark were ample, manufacturers were not always able to give prompt delivery. For the rest, the world's consumption has remained a long way below normal, and no improvement can be looked for at present in view of the increased international tension and undereamt of monetary demoralization in most countries.

The lack of purchasing power has, in the case of many products, resulted in a great decrease in collection, production, and so on, and with old stocks liquidated at often ruinous prices and gradually lessened by consumption the position in some cases is at least statistically improved. This, however, can not be said for bark and quinine. Exact figures can not be given because the Kina Bureau refrains from publishing information, but there is no doubt as to supplies exceeding requirements by a great deal. In addition, we have the efforts on the part of the Indian Government to extend cinchona culture and quinine manufacture so as to become independent of outside sources in time, both as regards India herself and, gradually, the British Empire. To encourage the spread of cinchona cultivation in India, the idea has been conceived that an arrangement should be made between Indian bark planters and Indian and British quinine makers on lines similar to those governing the Java cinchona contract, and that, in fact, the prices and conditions of the latter shall always apply to the former as well. It is also reckoned that falling prices will tend to eliminate a number of the smaller Java plantations, although it is not shown how Indian plantations could survive very unfavorable periods any better unless subventioned by the government.

At present India produces about 1½ million pounds of bark, yielding about 1 million ounces of quinine sulphate. There is at disposal under contract for the production of the British-owned Java plantations the equivalent of 1¼ million ounces S/Q (about one-tenth of the Java output of bark). If we estimate (curtailed) Java bark shipments, including the (contractual) quantity and that for Japan, at 9½ million ounces, the Java quinine shipments at 10½ million ounces, the Indian production at 1 million ounces, and the equivalent of the Amsterdam bark stock at 2 million ounces, we obtain a total of 23 million ounces, and it would be interesting to know how much of this quantity is unsalable under prevailing conditions, and how much quinine there is in first hands awaiting buyers. The plethora of Java bark is reflected in the absence of shipments from other sources and the low values reached by what may now be termed "outside" descriptions. Arrivals of Indian, Ceylon, Calisaya and African barks have been on the smallest scale, and old stocks have been (partly) realized at very modest figures. Shippers have naturally no ambition to consign parcels for the sole benefit of storage companies. Sales of druggists' barks in Holland have also again been disappointingly small; only four auctions were held during the year, and no more than 879 packages found buyers. The Bandong quinine factory declared a dividend of 10 per cent. on its increased capital on the ordinary shares for 1921, the cumulative preference shares receiving 9 per cent. According to the last report of the Amsterdam Quinine Works, Fl. 140 per share was paid out in dividends as against Fl. 120 the year before.

For the first time in London bark history no auctions were held here. The arrivals of bark in the United Kingdom are given below. To judge from the bills of entry the arrivals of Java manufacturing bark in the United Kingdom were only about 3,000 bales, against about 10,000 bales in the previous year. No details are available regarding output of quinine in Germany and France. Italy, where quinine is a state monopoly, appears to consume about 35,000 kilos per annum. The French are following up their experimental cinchona cultivation in Indo-China.

Imports of Bark into the United Kingdom

	Packages—		
	1922.	1921.	1920.
Indian	227	1,686	1,155
Ceylon	...	379	909
Java	57	207	697
African	56	375	643
Calisaya	503	3,650	4,878
Other South American	...	...	87
Totals	843	6,297	8,369

The Java barks consigned under the contract mentioned above are not included in the arrival figures for the past year.

Stocks of Bark, December 31

	Packages—	
	Amsterdam.	United Kingdom.
1922	Not published	3,126
1921	Not published	6,078
1920	13,536	4,285
1919	3,621	3,723
1918	2,000 (about)	4,098
1917	2,072	7,115
1916	.....	5,912
1915	.....	4,680
1914	.....	4,117
1913	.....	3,345

Stocks of Quinine Sulphate, London, December 31

	Ounces.
1922	129,776
1921	238,744
1920	343,216
1919	407,824
1918	217,360
1917	128,688

Quinine Prices, Second Hands

	Opening.		Closing.	
	s.	d.	s.	d.
1922	2	10	2	1½
1921	3	5	2	10
1920	5	3	3	8
1919	2	11	5	3
1918	3	4	2	11
1917	2	2	3	3
1916	3	6	2	8
1915	1	1½	3	6
1914	1	0	1	1¼
1913	0	9½	1	0

Java Quinine Exports

	Kilos.
1922 (Jan./June)	56,208
1921 (Jan./Dec.)	519,940
1920 (Jan./Dec.)	418,861
1919 (Jan./Dec.)	642,719
1918 (Jan./Dec.)	250,704
1917 (Jan./Dec.)	133,508

Java Bark Exports

	Kilos.
1922 (Jan./June)	2,955,000
1921 (Jan./Dec.)	4,601,000
1920 (Jan./Dec.)	4,526,000
1919 (Jan./Dec.)	5,901,000
1918 (Jan./Dec.)	2,439,000
1916-17 (July/June)	3,400,000
1915-16 (July/June)	8,817,270
1914-15 (July/June)	5,854,746
1913-14 (July/June)	8,076,617
1912-13 (July/June)	9,059,093

Bark Arrivals in United Kingdom

	Calisaya.	Other South American.	East India, Java and Africa.	Total.
1922	503	....	340	843
1921	3,650	....	2,647	6,297
1920	4,878	87	3,404	8,369
1919	4,343	....	8,354	12,697
1918	1,784	....	3,931	5,715
1917	3,841	....	8,059	11,900
1916	4,219	....	6,722	10,941
1915	925	....	5,763	6,688
1914	....	....	5,881	5,881
1913	....	....	3,420	3,420

Bark Consumption and Reshipments, United Kingdom

	Packages.
1922	3,795
1921	4,504
1920	7,807
1919	13,072
1918	8,732
1917	10,697
1916	9,709
1915	6,125
1914	5,109
1913	4,655

Cod Liver Oil Prices Low in Newfoundland

ST. JOHN'S, N. F., March 1, 1923.

As the codfishing season in Norway comes in the spring of the year and the catch is known before the Newfoundland fishing begins, there is opportunity for knowing in advance here what the prospects are likely to be during the ensuing year. The Norwegian catch in 1922 was 47,000,000 fish, compared with 39,000,000 in 1921, and the output of codliver oil was 79,313 barrels, in comparison with 37,388 barrels in 1921. This exceedingly large production, coming on top of a surplus carried over from 1921, caused prices to decline to the lowest mark for many years.

The price of codliver oil, in truth, has been below the cost of production; the drug trade expected to buy it at lower prices than dealers in Boston and New York were ready to pay for common cod oil. There was no object for refiners in Newfoundland to make oil, when they knew there was no posisbility of making their wages, more especially as common cod oil for tanning was in good demand.

A great deal of attention was given to the visit of Dr. S. S. Zilva of the Lister Institute, London, and Mr. Graham, biologist of the Fisheries Laboratory, Lowestoft, sent out here in July and August, by the Research Council of the British Government to investigate the merits of our cod liver oil.

These two scientists were looked after by the officials of the Marine and Fisheries Department, and received every assistance from our merchants. An excellent lecture was given by Dr. Zilva at the Grenfell Institute under the auspices of the Board of Trade. (The main object of their visit was to experiment on the spot, in the manufacture of the cod liver oil under many different conditions, as some oil is known to be very much superior in vitamine properties than others, and to try and locate which oil was actually the best.)

There is every reason to believe that the oil manufactured in the summer season, when the codfish have an abundant supply of caplin and squid bait, must be superior to the oil manufactured in the winter season when this food supply is scarce, and the spawning season of the codfish is progressing.

No actual facts have been received from Dr. Zilva since his return to London, and it may be several months before the results of his present experiments are known, but indications all point to the probability of our Newfoundland oil being ranked as very much superior in quality to the production of any other country.

These investigations have drawn the attention of scientists in all parts of the world to the wonderful properties contained in cod liver oil, and the above must lead to a future development of this industry.

EXPANSION

What Lehn & Fink, Inc., Have Done With Organization In One Year

WHEN Lehn & Fink, Inc., moved to their new seven-story building, which occupies almost all of a city block at Greenwich and Morton Streets, New York, a policy of expansion was outlined and adopted.

Policies are easy things to outline—to put them in successful operation is decidedly another matter. In a period of one year, however, expansion beyond that mapped out has been made by Lehn & Fink, Inc.

One year ago the Lehn & Fink city sales force consisted of 17 men, while 19 representatives were traveling for the company outside the Metropolitan District. Inasmuch as Lehn & Fink had practically a complete coverage of the Metropolitan territory, little expansion in personnel was possible in this department. During the year, however, two men were added to the city sales force.

Sales Force Nearly Doubled Outside Metropolitan Territory

In the district outside the Metropolitan area, the company has almost doubled its forces. The 19 men who formerly comprised this department have been increased to thirty-two. Lehn & Fink men today cover every State in the Union.

This numerical expansion is backed up by a similar expansion in management. While, of course, all the men operate under the direction and supervision of the New York office, branch offices have been opened in Chicago, St. Louis, New Orleans, Minneapolis and Los Angeles.

In addition to the regular country and city sales forces, Lehn & Fink, Inc., are represented by one man in South America. Three specialty salesmen are employed in the United States.

Detail Men Supplement Sales Force

Cooperating with the sales departments is a force of 10 Detail Men. Their duties are to call on dentists and give them the true scientific facts pertaining to Pebeco Tooth Paste. They also cover the retail druggists of the country, installing display material, making arrangements for sample distribution and endeavoring to build up good will for Lehn & Fink, Inc., and their leading specialties.

This external expansion has been supplemented by adequate internal additions to the Lehn & Fink personnel. In both city and country departments every possible effort has been made to build an organization equipped to render prompt and intelligent service to the customer.

This brief description of planned expansion would not be complete without again mentioning the remarkable physical facilities which make it possible. The Lehn & Fink Building at 635 Greenwich Street, New York City, is the most adequate for the purposes for which it was devised of any in the country. All possible modern equipment and labor-saving appliances have been installed to handle a maximum volume of business at a minimum expenditure of time and money. In Bloomfield, N. J., Lehn & Fink's model factory and laboratories actually manufacture over 5,000 different pharmaceutical products, in addition to Pebeco Tooth Paste and the "Lysol" Products.

Lehn & Fink, Inc., is a true American firm, actuated by the best American ideals. For forty-seven years, progress has been the guiding motive of the firm. In all these years, none has been more actively progressive than 1922, a year in which rapid and far-reaching expansion has been satisfactorily made.

LEHN & FINK, Inc.

635 Greenwich Street

NEW YORK CITY

Drug Work of Bureau of Chemistry

During the 1921-1922 fiscal year special attention was given by the United States Bureau of Chemistry to a campaign to eliminate excessive dirt from domestic crude drugs. An investigation showed that the shipping of dirty domestic crude drugs is a rather widespread practice and is due largely to carelessness in gathering. Excessive dirt constitutes adulteration in crude drugs shipped within the jurisdiction of the act. In some instances crude drugs were found to contain 20 per cent. or more of dirt, which obviously lessens the medicinal value of the drug. Preliminary educational work was carried on and plans formulated to take such regulatory action as may be necessary to correct this abuse.

Examination was made of the usual number of imported drug plants. Several shipments were found to be incorrectly labeled as to the plant from which obtained. Special attention was given to marjoram, since new adulterants were found, especially cistus leaves, which were sometimes present up to 25 per cent. or more.

Furfural

The work on the utilization of corncobs, which has been reported previously, has led to further experimentation in the manufacture and utilization of furfural. Heretofore the cost of furfural was too great to permit its general commercial use. It can now be made from corncobs by processes developed in the Bureau of Chemistry at a price that makes its use of interest to a number of manufacturing industries. It can be used, for instance, in the manufacture of synthetic resins which heretofore have been made chiefly from formaldehyde and phenol. The commercial demand for synthetic resin compounds is increasing rapidly, as they are used in the manufacture of printing plates, phonograph records, varnishes, pipe stems, electrical instrument parts, buttons, binders for brushes, glue, and many other useful articles. In addition to furfural, there have been obtained from corncobs acetic acid and a gummy material which can be used as an adhesive in the manufacture of pasteboard boxes, and may prove useful in the manufacture of coal briquettes.

Experiments are under way on the manufacture of furfural from other agricultural wastes, such as rice hulls, buckwheat hulls, cottonseed hulls, and peanut hulls. Peanut hulls yield less than one-third the amount of furfural that would be expected from a comparison of their pentosan content with that of corncobs. The yield with steam alone is so low as to preclude any commercial consideration of the use of peanut hulls as a source of furfural by the process as used for corncobs. There are indications that this yield may be considerably increased by the use of certain catalysts, and the effect of these will be studied.

Chloroform

A campaign was carried on during the year by Federal, State, and city officials to eliminate from the market decomposed chloroform put up in tins and found to be unfit for anesthesia purposes. The districts were instructed to proceed systematically with the collection and examination of chloroform in tin containers. Several seizures of the decomposed product were effected. Some of the leading manufacturers took steps to withdraw immediately from the market all of their chloroform that had been put up in tin containers. The cause of the deterioration of the chloroform has not been definitely ascertained, but it is thought that it may be due to the tin containers. The United States Pharmacopoeia specifies that chloroform shall be packed in glass.

Quicksilver Output Low in 1922

WASHINGTON, March 19, 1923.

Preliminary figures showing the production of quicksilver in the United States in 1922, compiled by F. L. Ransome of the United States Geological Survey, Department of the Interior, give a total of 6,497 flasks, of 75 pounds net, as compared with 6,339 flasks in 1921, which was the smallest annual output in the seventy-two years of recorded production of domestic quicksilver. In 1922 California produced 3,494 flasks; Texas, 2,725 flasks, and Nevada and Oregon, 278 flasks.

In California four mines were productive, but the output from all but the New Almaden group was very small. The New Idria mine continued non-productive, but the old Redington, or Boston, mine at Knoxville, Napa county, which had lain idle for many years, yielded some quicksilver and will probably be a larger producer in 1923, as a rotary furnace has been installed.

In Texas the Chisos mine, in the Terlingua district, Brewster county, yielded more quicksilver than any other mine in the United States. The Mariscal mine, near McKinney Springs, in the same county, was also productive. Prospecting was in progress at the Waldron mine, in the Terlingua district, 95 miles south of Alpine.

In Nevada the only production recorded was made from deposits in the Pilot Mountains, east of Mina, in Mineral county. The output from Oregon was practically negligible.

The tariff act of 1922, which went into effect September 21, placed a duty on imported quicksilver of 25 cents a pound, equivalent to $18.75 a flask. At the end of the year the directors of the great Almaden mine, in Spain, where extensive improvements have been in progress, reduced the price of quicksilver at the mine to the equivalent of about $45 per flask.

No important additions to known resources of domestic quicksilver were made during the year 1922, but the effect of the new import duty will probably be seen in a moderate increase in production in 1923.

Norwegian Output of Cod Liver Oil Large

BERGEN, March 1, 1923.

It was told last year that the prospect for the cod liver oil market in 1922 was quite bright, but, unfortunately, this has not been so. Despite all good wishes, it must be said that the year has been a very bad one for exporters.

When the cod fisheries started in 1922, the markets in Norway were practically depleted of fish as well as of medicinal cod liver oil. Consequently producers and exporters were keen on securing stocks and this resulted in comparatively high prices both for fish and for livers. The prices paid for cod livers in the fishing districts was further stimulated by the fact that speculation in oil took place on our home markets, and some attempts were made to corner the production.

Owing to the exceptionally good weather which prevailed all along the coast during the fishing season, the production of fish and oil soon increased. Furthermore the percentage of oil contained in the liver was unusually high (from 55 to 65 per cent.), and by the end of the Lofoten fishing season oil prices started to decline, especially in view of reports from Finmarken, that prospects for the catch in that district were also promising. However, by this time the season in Lofoten was practically over. The oil produced was very expensive and the Lofoten producers had to sell their stocks on hand at a loss.

The high oil content of the cod livers last year may be shown by the following comparison with 1912, the best previous year:—

	Fish.	Cod-liver oil. Barrels.
1912	99,200,000	76,211
1922	47,900,000	79,313

The loss to refiners was not so great as it was at first believed would be the case, as considerable quantities of 1921 oil as well as of the 1922 production was sold for industrial purposes. The available stocks of oil in Norway were, in fact, considerably reduced. Large factories making cooking fats and other edible products came into the markets and bought many thousand barrels at the favorable prices. It is to be said that the edible fats factories can pay and are paying the same prices for cod liver oil as the emulsion makers of the United Kingdom and the United States. This is a factor to be reckoned with in the future.

The consumption of medicinal cod liver oil is rapidly increasing. Especially has the research works in connection with vitamines, which are believed to exist in cod liver oil more than in any other food product, created an increasing demand. In spite of the fact that Germany, Austria and Russia are not buying, the consumption is larger than what it used to be.

As regards the prospects for the new catch, it is difficult to prognosticate anything at the present time, but the open winter which we are having makes us believe that unless a change takes place the weather will not be so favorable as was the case last year, because usually the mild winters are very stormy along the Norwegian coast.

	Production (Unrefined oil). Barrels.	Exports (Refined oil). Barrels.	Price.
1919	37,612	35,639	$75.00@100.00
1920	58,951	42,736	65.00@ 70.00
1921	57,388	58,013	14.50@ 20.00
1922	79,313	57,272	20.00@ 22.00

Salonica Opium Market

SALONICA, February 23, 1923.

During the year 1922, as a consequence of the regulations and restrictions which have been put into force by the leading countries, principally England and the United States, regarding the importation of drugs into their territories, the Salonica opium trade during the period under review has marked a considerable fall as compared with the trade of the past years. Business, has been rather slack and the total quantity exported to various countries must not have exceeded, for the whole year, about 600 cases.

A large part of shipments was destined to United States of America after which, Germany got a good share through Dutch ports, and some cases went also to Japan and to France.

As regards prices they have fluctuated according to the demand and from a parity of about 12/9 per pound,c.i.f., for a 15 per cent. morphine, H. & S., London, analysis, which was the value at the beginning of 1922, the price for our opium went up to 21/3 per pound, in September-October, and came down to 17/9 about the end of the year.

The reason of this weak situation of the article is due principally to the lack of demand for exportation, and also to the favorable news regarding the new crop which is not yet out, but which, it is said, will yield three times as much as that of last year.

If everything goes alright up to the time of the harvesting, we think that holders are justified in their desire to clear their present stock, as there is no doubt that as soon as the new crop comes in, prices will be much reduced especially on account of the very limited demand for export.

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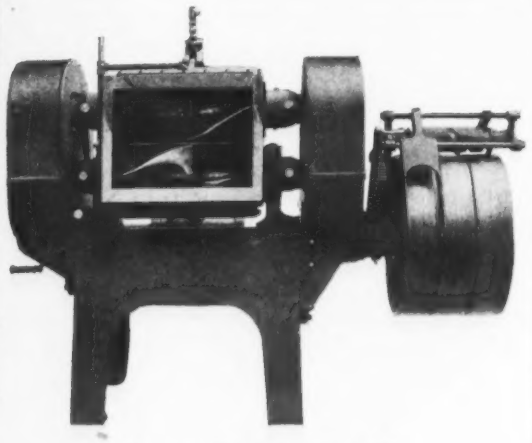

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Drugs and Fine Chemicals: Record of Prices

For convenience, the divisions of the opium and mercurial groups are arranged alphabetically under "Mercury" and "Opium"

Acetanilide

On August, 1891, the price was 54@56c.; October 17, 1891, 52c.; 1901, 19@21c., 1911, 20½@23c.; 1913, 21@22c.; 1918, 80c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.25	$0.25	$0.29	$0.29
February	.28	.24	.32	.29
March	.28	.27	.32½	.31
April	.27	.25	.31	.31
May	.26	.22	.31	.30
June	.26	.26	.30	.29
July	.30	.26	.29	.29
August	.29	.28	.30	.29
September	.29	.29	.28	.28
October	.29	.29	.31	.28
November	.29	.29	.33	.31
December	.29	.29	.35	.33
Year	.30	.22	.35	.28

Acetphenetidin

On November 14, 1910, the price was 80@85c.; October 17, 1911, 82½@85c.; 1913, 84@85c.; 1917, February, $25.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.90	$1.70	$1.65	$1.65
February	1.65	1.60	1.65	1.65
March	1.60	1.60	1.65	1.65
April	1.60	1.60	1.65	1.65
May	1.50	1.50	1.85	1.85
June	1.50	1.40	1.85	1.85
July	1.40	1.40	1.85	1.85
August	1.40	1.35	1.85	1.85
September	1.35	1.35	1.85	1.85
October	1.65	1.35	1.85	1.85
November	1.65	1.65	1.85	1.85
December	1.65	1.65	1.85	1.85
Year	1.90	1.35	1.85	1.65

Alcohol

On October 18, 1871, the price of ethyl was $1.81½@1.90; 1881, ethyl, $2.18@2.20; 1891, 2.30@2.32; 1901, ethyl, $2.51@2.53; wood, 95 per cent., 60c.; 1911, ethyl, $2.56@2.58; methyl, 95 per cent., 50@52c.; denatured, 40@42c.; 1913, ethyl, $2.50@2.52; methyl, 46@47c.; denatured, 35@38c.; ethyl, 1917, October, $5.00; methyl, 1920, $3.25; denatured, 1920, May, $1.11.

	1921. Per gallon					
	Ethyl, 188 proof.		Methyl, 95%		Denatured No. 5.	
	H.	L.	H.	L.	H.	L.
Jan.	$4.90	$4.90	$1.65	$1.28	$0.84	$0.67
Feb.	4.90	4.85	1.28	1.28	.67	.67
March	4.85	4.75	1.28	.77	.67	.39
April	4.75	4.75	.77	.77	.36	.36
May	4.75	4.65	.77	.77	.38	.36
June	4.65	4.65	.77	.77	.36	.36
July	4.65	4.65	.77	.77	.36	.36
Aug.	4.65	4.65	.71	.60	.36	.34
Sept.	4.65	4.65	.60	.60	.39	.35
Oct.	4.65	4.65	.60	.60	.41	.40
Nov.	4.65	4.65	.60	.57	.41	.35
Dec.	4.65	4.65	.57	.57	.38	.36
Year	5.00	4.65	1.65	.57	.84	.34

	1922. Per gallon					
	Ethyl, 188 proof.		Methyl, 95%		Denatured No. 5.	
	H.	L.	H.	L.	H.	L.
Jan.	$4.65	$4.65	$0.57	$0.55	$0.40	$0.36
Feb.	4.65	4.65	.55	.50	.36	.34
March	4.65	4.65	.54	.54	.34	.34
April	4.65	4.65	.52	.52	.25	.25
May	4.65	4.65	.52	.52	.28	.28
June	4.65	4.65	.52	.52	.31	.28
July	4.65	4.65	.52	.52	.31	.31
Aug.	4.65	4.65	.52	.52	.32	.31
Sept.	4.65	4.65	.64	.52	.34	.34
Oct.	4.67	4.67	.88	.64	.36	.36
Nov.	4.67	4.67	.98	.88	.36	.36
Dec.	4.67	4.67	1.13	.98	.38	.36
Year	4.67	4.65	1.13	.50	.40	.25

Aspirin, Powdered

On March 10, 1917, the price was $3.50.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.70	$0.65	$0.75	$0.70
February	.63	.62	.72	.70
March	.60	.58	.75	.75
April	.55	.53	.78	.76
May	.58	.50	.78	.76
June	.58	.50	.76	.73
July	.60	.60	.75	.73
August	.60	.60	.85	.75
September	.60	.55	.85	.85
October	.56	.55	.95	.85
November	.65	.56	1.00	.95
December	.75	.70	1.00	1.00
Year	.75	.50	1.00	.70

Bismuth, Subnitrate, Powdered

On May 6, 1875, the price was $2; October 18, 1881, $1.85; 1891, $1.90; 1901, $1.40@1.45; 1911, $1.80@1.85; 1913, $1.80@1.85; 1918, April, $6.20.

	Per pound			
	1922.		1922.	
	H.	L.	H.	L.
January	$2.60	$2.60	$2.00	$1.75
February	2.35	2.00	2.00	2.00
March	2.00	2.00	2.00	2.00
April	2.00	2.00	2.00	2.00
May	2.00	1.85	2.15	2.00
June	1.80	1.80	2.15	2.15
July	1.80	1.80	2.15	2.15
August	1.80	1.80	2.15	2.15
September	1.80	1.80	2.45	2.30
October	1.80	1.80	2.65	2.45
November	1.80	1.80	2.65	2.65
December	1.80	1.80	2.65	2.65
Year	2.00	1.80	2.65	1.75

Borax

On October 18, 1871, the price was 32@33c.; 1881, 12½@13½c.; 1891, 8⅝@8⅞c.; 1901, 7¼@7½c.; 1911, 3½@3¾c.; 1913, 3⅞@4c.; 1920, January, 8½c.

	Per pound			
	In sacks. 1921.		In barrels. 1921.	
	H.	L.	H.	L.
January	$0.06¾	$0.06¾	$0.07¼	$0.07¼
February	.06¾	.06¾	.07¼	.07¼
March	.06	.06	.06½	.06½
April	.06	.06	.06	.06½
May	.05¾	.05½	.06¼	.05¾
June	.05½	.05½	.05¾	.05¾
July	.05½	.05½	.05¾	.05¾
August	.05½	.05½	.05¾	.05¾
September	.05½	.05½	.05¾	.05¾
October	.05½	.05½	.05¾	.05¾
November	.05½	.05½	.05¾	.05¾
December	.06¾	.05½	.07¼	.05¾

	Per pound			
	In sacks. 1922.		In barrels. 1922.	
	H.	L.	H.	L.
January	$0.05½	$0.05½	$0.05¾	$0.05¾
February	.05¼	.05¼	.05½	.05½
March	.05¼	.05¼	.05½	.05½
April	.05¼	.05¼	.05½	.05½
May	.05¼	.05¼	.05½	.05½
June	.05¼	.05¼	.05½	.05½
July	.05¼	.05¼	.05½	.05½
August	.05¼	.05¼	.05½	.05½
September	.05¼	.05¼	.05½	.05½
October	.05¼	.05¼	.05½	.05½
November	.05¼	.05¼	.05½	.05½
December	.05¼	.05¼	.05½	.05½
Year	.05½	.05¼	.05¾	.05½

Bromine, Purified

On October 18, 1871, the price was 90c.; 1885, 33c.; 1891, 17⅝@40c.; 1904, 48@53c.; 1911, 25@30c.; 1913, 30@35c.; 1919, December, 85c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.53	$0.53	$0.27	$0.27
February	.53	.53	.27	.27
March	.53	.40	.27	.27
April	.27	.27	.27	.27
May	.27	.27	.27	.27
June	.27	.27	.27	.25
July	.27	.27	.25	.25
August	.27	.27	.25	.25
September	.27	.27	.25	.25
October	.27	.27	.25	.25
November	.27	.27	.25	.25
December	.27	.27	.25	.25
Year	.53	.27	.27	.25

Bromides

On June 5, 1872, the price of ammonium was $1.90@1.95; potassium, May 29, 1872, $1.20@1.30; sodium, $3.50@3.60; October 18, 1881, ammonium, 42c.; potassium, 29@30c.; sodium, 42c.; 1891, ammonium, 36c.; potassium, 24@26c.; sodium, 36c.; 1901, ammonium, 55c.; potassium, 46@47c.; sodium, 51c.; 1911, ammonium, 41@42c.; potassium, 31@34c.; sodium, 37@38c.; 1913, ammonium, 49@50c.; potassium, 39@40c.; sodium, 45@46c.; ammonium, 1917, January, $1; potassium, 1917, November, $1.45; sodium, 1920, June, 85c.

	1921. Per pound, granular					
	Ammonium.		Potassium.		Sodium.	
	H.	L.	H.	L.	H.	L.
January	$0.49	$0.49	$0.44	$0.44	$0.42	$0.42
February	.49	.49	.44	.44	.42	.42
March	.49	.39	.44	.34	.42	.32
April	.39	.34	.34	.29	.32	.27
May	.34	.34	.29	.24	.27	.25
June	.34	.34	.24	.24	.25	.25
July	.34	.34	.24	.24	.25	.25
August	.34	.34	.24	.24	.25	.25
September	.34	.27	.24	.19	.25	.20
October	.27	.27	.19	.19	.20	.20
November	.27	.27	.19	.19	.20	.20
December	.27	.27	.19	.19	.20	.20
Year	.49	.27	.44	.19	.42	.20

	1922. Per pound, granular					
	Ammonium.		Potassium.		Sodium.	
	H.	L.	H.	L.	H.	L.
January	$0.22	$0.22	$0.14	$0.14	$0.16	$0.16
February	.22	.22	.14	.13	.16	.15
March	.22	.22	.17	.14	.15	.15
April	.22	.17½	.17	.17	.15	.15
May	.17½	.17½	.17	.15½	.15	.15
June	.17½	.16	.15½	.15½	.15	.15
July	.16	.16	.15½	.15½	.15	.15
August	.16	.16	.15½	.15½	.15	.15
September	.16	.16	.15½	.15½	.15	.15
October	.18	.16	.18	.16½	.18	.16½
November	.18	.18	.18	.18	.18	.18
December	.18	.18	.18	.18	.18	.18
Year	.22	.16	.18	.13	.18	.15

Camphor, Monobromated

On November 4, 1907, the price was $1.40@1.50; October 18, 1911, 95c.@$1.05; 1913, $1@1.10; 1919, December, $5.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$2.75	$2.50	$1.70	$1.70
February	2.25	2.25	1.70	1.70
March	2.25	2.25	1.70	1.70
April	2.00	1.75	1.70	1.70
May	1.75	1.75	1.70	1.70
June	1.75	1.75	1.70	1.70
July	1.75	1.60	1.70	1.70
August	1.60	1.60	1.90	1.70
September	1.60	1.60	1.90	1.90
October	1.90	1.60	1.90	1.90
November	1.70	1.60	1.90	1.90
December	1.70	1.60	1.90	1.90
Year	2.75	1.60	1.90	1.70

Cantharides, Chinese

On October, 1871, the price was $1.60; 1881, 90@95c.; 1891, 95c.; 1901, 61@65c.; 1911, 18@20c.; 1913, 45@50c.; 1920, January, $1.40.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.80	$0.75	$1.05	$0.95
February	.75	.75	1.05	.95
March	.75	.75	1.15	.95
April	.75	.75	1.25	1.00
May	.85	.75	1.25	1.00
June	.85	.85	1.00	1.00
July	.85	.75	1.00	1.00
August	.75	.75	1.00	1.00
September	.75	.75	1.00	1.00
October	.80	.75	1.05	1.00
November	.90	.80	1.10	1.05
December	.95	.95	1.10	1.10
Year	.95	.75	1.25	.95

Caffeine, Alkaloid

On August 20, 1894, the price was $3@3.10; October 18, 1901, $3.75@4; 1911, $3.15@3.25; 1913, $3.40@3.50; 1918, April, $13.50.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$6.00	$6.25	$4.25	$4.00
February	6.15	6.00	3.75	3.75
March	6.00	6.00	3.75	3.75
April	6.25	6.25	3.75	3.75
May	6.15	5.90	3.75	3.75
June	5.90	5.75	3.75	3.60
July	5.60	5.40	3.50	3.50
August	5.50	4.75	3.50	3.50
September	4.75	4.60	3.50	3.50
October	4.75	4.50	3.75	3.75
November	4.50	4.35	3.75	3.75
December	4.25	4.00	3.75	3.75
Year	6.00	4.00	4.25	3.50

Castor Oil, Medicinal

On October 18, 1871, the price was 18@19c.; 1881, 14½c.; 1891, 12c.; 1901, 12c.; 1911, 10½c.; 1913, 9⅝@9½c.; 1918, August, 30c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.12	$0.11	$0.11½	$0.11½
February	.11	.11	.11½	.11½
March	.11	.10	.11½	.11½
April	.10	.08¾	.11½	.11½
May	.10	.08¾	.12	.12
June	.10	.10	.12	.12
July	.11	.10	.12½	.12
August	.11	.11	.13	.13
September	.11	.11	.13	.13
October	.11½	.11	.13	.12½
November	.11½	.11½	.12½	.12½
December	.11½	.11½	.12½	.12½
Year	.12	.08¾	.13	.11½

Chloral Hydrate

On February 25, 1874, the price was $1.90; October 18, 1881, $1.35@1.80; 1891, $1.05@1.15; 1901, 95c.@$1; 1911, 74@76c.; 1913, 61@64c.; 1918, April, $2.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.00	$1.00	$0.85	$0.85
February	1.00	.93	.85	.85
March	.93	.85	.85	.85
April	.85	.85	.75	.75
May	.83	.83	.75	.75
June	.90	.85	.75	.75
July	.90	.90	.75	.75
August	.75	.75	.75	.75
September	.75	.75	.75	.75
October	.75	.75	.75	.75
November	.75	.75	.75	.75
December	.85	.85	.75	.75
Year	1.00	.75	.85	.75

Chloroform, U. S. P.

On February 25, 1874, the price was $1.05; October 18, 1881, 65c.; 1891, 50@55c.; 1901, 45@55c.; 1911, 25@33c.; 1913, 25@30c.; 1917, November, 70c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.43	$0.40	$0.37	$0.37
February	.40	.40	.37	.37
March	.40	.40	.37	.33
April	.40	.40	.37	.33
May	.40	.36	.33	.27
June	.38	.38	.28	.25
July	.38	.38	.25	.25
August	.38	.35	.25	.25
September	.36	.35	.25	.25
October	.36	.36	.35	.25
November	.36	.36	.35	.35
December	.37	.36	.35	.35
Year	.43	.35	.37	.25

Citrate Potash

On May 29, 1872, the price was $1@1.05; October 18, 1881, 60c.; 1891, 50c.; 1901, 33c.; 1911, 38c.; 1913, 48c.; 1919, January, $2.02.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.60	$1.53	$0.65	$0.65
February	1.53	1.38	.65	.65
March	1.38	1.38	.65	.65
April	1.38	1.15	.65	.65
May	1.15	1.15	.65	.65
June	1.15	.68	.65	.65
July	.68	.68	.65	.65
August	.68	.68	.65	.65
September	.68	.65	.65	.65
October	.65	.65	.65	.65
November	.65	.65	.65	.65
December	.65	.65	.65	.65
Year	1.60	.65	.65	.65

Cocaine, Hydrochloride

(Granular)

On August 10, 1891, $6.50@7; October 18, 1901, $5.50@5.55; 1911, $3.25@3.35; 1913, $3.35@3.60; 1918, June, $11.25.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$10.25	$10.25	$6.25	$6.25
February	10.25	9.25	6.25	6.25
March	9.25	8.25	6.00	6.00
April	8.25	8.25	6.00	6.00
May	8.25	8.25	6.00	6.00
June	8.25	7.25	6.00	6.00
July	7.25	6.75	6.00	6.00
August	6.75	6.75	6.00	6.00
September	6.75	6.25	7.00	6.00
October	6.25	6.25	7.00	7.00
November	6.25	6.25	7.00	7.00
December	6.25	6.25	7.00	7.00
Year	10.25	6.25	7.00	6.00

Cocoa Butter

On April 2, 1879, the price was 37½c.; October 8, 1881, 50c.; 1891, 32@42c.; 1901, 34½@35½c.; 1911, 45@48c.; 1913, 36@39c.; bulk, 1919, March, 52c.; fingers, 1919, September, 52c.

	1921 Per pound				1922 Per pound			
	Bulk.		Wrapped fingers in 12-lb. boxes.		Bulk.		Wrapped fingers in 12-lb. boxes.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan.	.28	.26	.39	.37	.34	.26½	.35½	.32½
Feb.	.28	.28	.37	.36	.34	.34	.35½	.35½
Mar.	.30	.27	.36	.36	.34	.28	.35½	.34
Apr.	.27	.24	.36	.36	.27	.27	.34	.34
May	.23	.23	.35	.35	.28	.27	.34	.34
June	.25	.23	.35	.34½	.28	.28	.34	.34
July	.23	.23	.34½	.33½	.28	.28	.35	.34
Aug.	.25	.23	.33½	.33½	.28	.28	.35	.35
Sept.	.25	.25	.33½	.33½	.35	.32	.36	.35
Oct.	.29	.26	.34½	.34½	.33	.33	.36	.35
Nov.	.30	.30	.34½	.34½	.33	.32	.36½	.35
Dec.	.30	.25¾	.32½	.32½	.32	.32	.36	.36
Year	.30	.23	.39	.32½	.35	.26½	.36½	.32½

Codliver Oil, Newfoundland

On March 26, 1873, the price was $36@40.50; October 18, 1881, $24; 1891, $18.90@21; 1901, $18@19.50; 1911, $32; 1913, $24@28; 1916, July, $130.

	Per barrel			
	1921.		1922.	
	H.	L.	H.	L.
January	$42.00	$36.00	Nominal	
February	35.00	35.00	Nominal	
March	32.00	25.00	$20.00	$19.00
April	25.00	19.00	20.00	20.00
May	20.00	13.00	20.00	20.00
June	20.00	20.00	20.00	20.00
July	20.00	15.00	20.00	20.00
August	15.00	15.00	20.00	20.00
September	16.50	15.00	20.00	20.00
October	16.50	16.50	20.00	20.00
November	Nominal		20.00	20.00
December	Nominal		20.00	20.00
Year	42.00	13.00	20.00	19.00

Codliver Oil, Norwegian

In September, 1872, the price was $60; October 18, 1881, $36@45; 1891, $23.50@32; 1901, $21.50@25; 1911; $35@37; 1913, $24.50@25; 1916, April, $150.

	Per barrel			
	1921.		1922.	
	H.	L.	H.	L.
January	$40.00	$37.00	$21.00	$21.00
February	35.00	32.00	21.00	19.50
March	30.00	24.00	21.00	18.00
April	23.00	10.00	23.00	23.00
May	16.00	12.00	23.00	22.00
June	18.00	17.00	22.00	21.50
July	18.00	15.00	21.50	21.00
August	15.50	15.00	23.00	21.00
September	16.50	15.00	23.00	22.00
October	18.00	16.50	22.00	22.00
November	17.50	17.50	22.00	21.50
December	20.00	17.00	22.00	21.50
Year	40.00	10.00	23.00	19.50

Corn Syrup—42 Degrees

On February 25, 1874, the price was $9; October 18, 1881, $4@4.75; 1891, $2.90@3.25; 1901, $1.65; 1911, $2.33; 1913, $2.31; 1917, August, $6.39.

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$3.14	$2.89	$2.02	$1.92
February	2.89	2.89	2.27	2.17
March	2.74	2.49	2.37	2.27
April	2.34	2.24	2.37	2.27
May	2.49	2.49	2.52	2.37
June	2.49	2.49	2.52	2.52
July	2.49	2.39	2.57	2.52
August	2.39	2.29	2.57	2.57
September	2.29	2.09	2.57	2.57
October	2.09	1.99	2.82	2.57
November	1.89	1.79	2.82	2.82
December	2.04	1.79	2.82	2.82
Year	3.14	1.79	2.82	1.92

Coumarin

On August 20, 1894, the price was $17@25; October 18, 1901, $4.40@4.50; 1911, $3.10@3.25; 1913, $3.10@3.24; 1918 June, $32.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$5.50	$5.25	$3.75	$3.40
February	5.10	4.75	3.25	3.00
March	4.50	4.00	3.00	3.00
April	4.00	3.75	3.00	3.00
May	4.50	3.75	3.00	3.00
June	4.60	4.50	3.00	3.00
July	4.50	4.50	3.50	3.00
August	4.50	4.35	3.50	3.40
September	4.35	4.15	3.40	3.40
October	4.15	4.15	4.00	3.40
November	4.00	3.75	4.00	4.00
December	3.75	3.75	4.00	4.00
Year	5.50	3.75	4.00	3.00

Cream of Tartar, Powder

On October 18, 1871, the price was 30¼c.; 1881, 32@33c.; 1891, 23@23½c.; 1901, 9@9⅝c.; 1911, 23¼@24c.; 1913, 24¾@25c.; 1918, July, 68½c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.41	$0.31	$0.26	$0.23½
February	.30	.30	.23½	.23½
March	.30	.30	.24½	.23½
April	.30	.30	.24½	.23½
May	.30	.29	.23½	.23
June	.29	.28½	.23	.23
July	.28½	.28½	.23	.23
August	.27½	.27	.23	.23
September	.26½	.26	.24	.23
October	.26	.26	.25	.23
November	.28	.26½	.26½	.25
December	.26½	.26	.25	.25
Year	.41	.26	.26½	.23

Epsom Salt, Technical

On October 18, 1871, the price was $3; 1881, $1.50; 1891, $1; 1901, 90c.; 1911, 85c.; 1913, $1.05; 1907, June, $4.37½.

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.75	$1.50	$1.15	$1.00
February	1.50	1.40	1.00	1.00
March	1.40	1.10	1.00	1.00
April	1.12	1.10	1.00	1.00
May	1.25	1.10	1.00	.90
June	1.10	1.10	.90	.90
July	1.10	1.10	.90	.90
August	1.10	1.10	.85	.85
September	1.10	1.10	.85	.85
October	1.10	1.10	.85	.85
November	1.10	1.10	1.20	1.10
December	1.10	1.10	1.20	1.20
Year	1.75	1.10	1.20	.85

Epsom Salt, U. S. P.

On October 18, 1871, the price was $3; 1881, $1.50; 1891, $1.10; 1901, $1.25; 1911, 90c.; 1913, $1.50; 1917, June, $4.37½.

	Per 100 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$2.75	$2.75	$2.50	$2.50
February	2.75	2.50	2.50	2.50
March	2.50	2.50	2.50	2.50
April	2.50	2.50	2.50	2.50
May	2.75	2.50	2.50	2.50
June	2.75	2.75	2.00	2.00
July	2.75	2.75	2.00	2.00
August	2.75	2.75	2.00	2.00
September	2.75	2.75	2.00	2.00
October	2.50	2.20	2.00	2.00
November	2.50	2.50	2.25	2.00
December	2.50	2.50	2.25	2.25
Year	2.75	2.20	2.50	2.00

Formaldehyde

On April 11, 1898, the price was 19@20c.; October 18, 1901, 16@17c.; 1911, 8½@9½c.; 1913, 8½@9½c.; 1920, March, 85c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.18½	$0.17½	$0.10¼	$0.10
February	.18	.17½	.09½	.09
March	.17	.15	.09	.09
April	.15	.14½	.09	.09
May	.14½	.14	.09	.08¾
June	.14	.13	.08¼	.08¼
July	.13	.12½	.08	.08
August	.12½	.12	.08	.08
September	.12	.11	.10	.09
October	.11	.11	.12¾	.10
November	.11	.10½	.13½	.13
December	.10½	.10½	.16	.13
Year	.18½	.10½	.16	.08

Fusel Oil, Refined

On January 3, 1898, the price was 55@60c.; October 18, 1901, 60@75c.; 1911, $3@3.25; 1913, $1.35@1.50; 1918, January, $5.75.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$4.00	$4.00	$2.50	$2.50
February	4.00	4.00	2.50	2.50
March	4.00	4.00	1.40	1.25
April	4.00	4.00	2.15	2.10
May	4.00	4.00	2.10	2.10
June	4.20	4.20	2.10	2.10
July	2.50	2.50	2.10	2.10
August	2.50	2.50	2.10	2.10
September	2.50	2.50	2.10	2.10
October	2.50	2.50	2.10	2.10
November	2.50	2.50	2.50	2.10
December	2.50	2.50	3.00	2.50
Year	4.00	2.50	3.00	1.25

Glycerin, C. P.

On May 29, 1872, the price was 58@80c.; October 18, 1881, 36@65c.; 1891, 15@18c.; 1901, 14½@14¾c.; 1911, 20c.; 1913, 21c.; 1917, October, 70c.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$0.20	$0.19	$0.16½	$0.16
February	.20	.19	.16½	.16¼
March	.19	.18	.16½	.15½
April	.17½	.17	.15½	.15
May	.17	.16½	.15	.15
June	.16½	.15½	.14¾	.14¾
July	.15½	.14½	.16	.15
August	.14¾	.14	.17	.16¼
September	.14½	.14½	.18	.17
October	.14½	.14	.18½	.18½
November	.14½	.14	.18½	.18½
December	.16	.15	.18½	.18½
Year	.20	.14	.18½	.14¾

Eleven Years' Prices

	Per pound	
	H.	L.
1922	$0.18½	$0.14¾
1921	.20	.14
1920	.28½	.20
1919	.24	.20
1918	.68	.52
1917	.70	.52
1916	.60	.36½
1915	.65	.19¼
1914	.27	.19¾
1913	.21	.18¾
1912	.20	.16

Glycerin, Dynamite

On December 30, 1895, the price was 14¾@15c.; October 18, 1901, 13@13¼c.; 1911, 16¼@16½c.; 1913, 19¾@20c.; 1917, October, 70c.

	1921.		1922	
	Per pound			
	H.	L.	H.	L.
January	$0.17½	$0.15½	$0.15¼	$0.15
February	.17	.16½	.15	.14
March	.15	.13½	.14	.13
April	.13	.13	.13	.13
May	.15	.14	.13¼	.12½
June	.14	.12½	.13½	.13¼
July	.12¾	.11¾	.15	.13½
August	.13	.12½	.15¾	.15
September	.12½	.12	.18	.15¼
October	.12½	.12¼	.17¾	.17
November	.12½	.12½	.17½	.17½
December	.15	.13	.16¼	.16½
Year	.17½	.11¾	.18	.12½

Glycerin, Soaplye

On August 1, 1904, the price was 9¼@9¾c.; October 18, 1911, 12½@13c.; 1913, 14¼@14½c.; 1917, October, 51c.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$0.13	$0.08½	$0.10¼	$0.09½
February	.12	.10½	.10¼	.08
March	.10	.09	.08½	.08
April	.10	.08½	.08	.08
May	.10½	.09	.08	.08
June	.09	.09	.09	.08
July	.08	.07½	.10	.09
August	.08½	.08	.10¾	.10
September	.08½	.08½	.12	.10¾
October	.08½	.08	.12	.11
November	.08	.08	.11	.11
December	.09¾	.09	.10¾	.10½
Year	.13	.07½	.12	.08

Glycerin, Saponification

On August 1, 1904, the price was 11@11½c.; October 18, 1911, 14½@15c.; 1913, 16½@17c.; 1917, October, 55c.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$0.18	$0.16½	$0.12	$0.11
February	.13	.11½	.11½	.09
March	.11	.10	.09½	.09
April	.11	.10	.09	.09
May	.11½	.10	.10	.08½
June	.10	.10	.09½	.08½
July	.09	.08	.10½	.10
August	.09	.09	.12	.10¼
September	.09	.09	.13	.12¼
October	.09	.09	.13	.12½
November	.09	.09	.12½	.12½
December	.11	.10	.12	.12
Year	.18	.08	.13	.08½

Harlem Oil, Domestic

On May 29, 1872, the price of foreign oil was $3.50@3.60; October 18, 1901, foreign, $2@2.10; 1911, foreign, $1.85@2; 1913, foreign, $2; 1918, domestic, $8.50.

	1921.		1922.	
	Per gross bottles			
	H.	L.	H.	L.
January	$3.25	$3.25	$3.50	$3.50
February	3.25	3.25	3.50	3.50
March	3.25	3.00	3.50	3.50
April	3.00	3.00	3.50	3.50
May	3.00	3.00	3.50	3.50
June	3.00	3.00	3.50	3.50
July	3.00	3.00	3.50	3.50
August	3.00	3.00	3.50	3.50
September	3.00	3.00	3.50	3.50
October	3.00	3.00	3.50	3.50
November	3.00	3.00	3.50	3.50
December	3.00	3.00	3.50	3.50
Year	3.25	3.00	3.50	3.50

Hypophosphites

On August 20, 1894, the price of lime potash and soda was $1.02½@1.10; October 18, 1901, lime, 58@70c.; potash, 58@70c.; soda, 58@70c.; 1911, lime, 60@64c.; potash, 65@69c.; soda, 65@69c.; 1913, lime, 54@58c.; potash, 59@63c.; soda, 59@63c.; 1918, lime, August, $1; potash, 1917, August, $2.15; soda, 1917, $1.10.

	1921.					
	Lime.		Potash.		Soda.	
	Per pound					
	H.	L.	H.	L.	H.	L.
January	$0.85	$0.85	$1.50	$1.50	$0.95	$0.95
February	.80	.80	1.35	1.35	1.65	1.65
March	.80	.80	1.35	1.35	1.65	1.65
April	.70	.70	1.10	1.10	.80	.80
May	.70	.70	1.10	1.10	.80	.80
June	.70	.70	1.10	1.10	.80	.80
July	.70	.70	1.10	1.10	.80	.80
August	.70	.65	1.10	.85	.80	.75
September	.65	.65	.85	.85	.75	.75
October	.65	.65	.85	.85	.75	.75
November	.65	.65	.85	.85	.75	.75
December	.65	.65	.85	.85	.75	.75
Year	.85	.65	1.50	.85	1.65	.75

1922.

	Lime.		Potash.		Soda.	
	Per pound					
	H.	L.	H.	L.	H.	L.
January	$0.65	$0.65	$0.85	$0.85	$0.75	$0.75
February	.65	.65	.85	.85	.75	.75
March	.65	.65	.85	.85	.75	.75
April	.65	.65	.85	.85	.75	.75
May	.65	.65	.85	.85	.75	.75
June	.65	.65	.85	.85	.75	.75
July	.65	.65	.85	.85	.75	.75
August	.65	.65	.85	.85	.75	.75
September	.65	.65	.85	.85	.75	.75
October	.65	.65	.85	.85	.75	.75
November	.65	.65	.85	.85	.75	.75
December	.65	.65	.85	.85	.75	.75
Year	.65	.65	.85	.85	.75	.75

Iodide, Potassium

On May 29, 1872, the price was $9; October 18, 1881, $2.10; 1891, $2.58@2.63; 1901, $2.05@2.10; 1911, $2.10@2.15; 1913, $2.95@3; 1917, November, $3.75.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$3.00	$3.00	$2.90	$2.85
February	3.00	3.00	3.15	2.85
March	3.00	2.40	3.15	3.15
April	2.40	2.40	3.15	3.15
May	2.60	2.35	3.30	3.15
June	2.65	2.60	3.30	3.30
July	2.65	2.65	3.30	3.30
August	2.65	2.65	3.30	3.30
September	2.65	2.65	3.45	3.45
October	2.65	2.65	3.45	3.45
November	2.60	2.60	3.45	3.45
December	2.90	2.60	3.60	3.45
Year	3.00	2.35	3.60	2.85

Iodine, Resublimed

On May 29, 1872, the price was $11; October 18, 1881, $3.25; 1891, $3.30@3.35; 1901, $2.70@2.75; 1911, $2.60@2.65; 1913, $3.55@3.60; 1919, August, $4.50.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$4.00	$4.00	$3.80	$3.80
February	4.00	3.75	4.05	3.80
March	3.75	3.75	4.05	4.05
April	3.75	3.75	4.05	4.05
May	3.75	3.60	4.20	4.05
June	3.60	3.60	4.20	4.20
July	3.60	3.50	4.20	4.20
August	3.50	3.50	4.20	4.20
September	3.50	3.50	4.40	4.40
October	3.50	3.50	4.40	4.40
November	3.50	3.50	4.40	4.40
December	3.80	3.50	4.50	4.40
Year	4.00	3.50	4.50	3.80

Magnesia Carbonate, U. S. P.

On May 29, 1872, the price was 20@32c.; October 18, 1881, 18@19c.; 1911, 5¼@6¾c.; 1913, 5½@6c.; 1918, April, 25c.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$0.15	$0.15	$0.12	$0.12
February	.15	.15	.12	.12
March	.15	.15	.12	.12
April	.15	.15	.12	.12
May	.14	.14	.12	.12
June	.14	.14	.12	.12
July	.14	.13	.12	.10½
August	.13	.13	.10½	.10½
September	.13	.12	.13	.13
October	.12	.12	.13	.13
November	.12	.12	.13	.13
December	.12	.12	.10½	.10½
Year	.15	.12	.13	.10½

Menthol

On April 23, 1884, the price was $8.50; October 18, 1891, $2.40@3.50; 1901, $4.25@4.50; 1911, $6; 1913, $4.10@4.25; 1920, January, $14.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$4.50	$4.00	$5.25	$5.25
February	4.50	4.40	5.25	5.25
March	4.40	4.25	6.25	5.25
April	4.00	3.85	6.25	6.25
May	3.85	3.75	6.25	5.65
June	3.75	3.75	5.50	5.40
July	4.25	4.00	6.25	6.00
August	4.35	4.35	6.25	6.25
September	4.35	4.35	6.25	6.15
October	4.75	4.50	8.00	6.25
November	4.75	4.75	10.00	7.00
December	5.25	4.75	10.50	10.00
Year	5.25	3.75	10.50	5.25

Twenty-eight Years' Prices

	H.	L.		H.	L.
1922	$10.50	$5.25	1908	$2.15	$1.85
1921	5.25	3.75	1907	2.60	1.90
1920	14.00	4.00	1906	2.90	2.15
1919	7.40	3.15	1905	3.00	1.75
1918	7.40	3.15	1904	6.25	2.50
1917	3.50	2.85	1903	8.00	5.25
1916	3.40	2.75	1902	7.00	3.80
1915	3.50	2.50	1901	4.75	3.50
1914	4.75	2.35	1900	3.90	2.35
1913	10.25	2.70	1899	3.00	1.20
1912	14.00	6.00	1898	2.60	2.00
1911	7.00	3.45	1897	4.20	1.85
1910	3.45	2.60	1896	4.75	2.50
1909	2.75	2.05	1895	4.75	**4.00**

Mercurials

Calomel

On June 5, 1872, the price was $1@1.35; October 18, 1881, 60@95c.; 1891, 78c.@$1.10; 1901, 86c.@$1.10; 1911, 94c.@$1.10; 1913, 69c.@$1.02½; 1918, July, $2.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$1.10	$1.10	$0.82	$0.82
February	1.00	1.00	.88	.82
March	1.00	.93	.88	.88
April	.93	.93	.88	.88
May	.93	.87	.94	.94
June	.87	.82	.94	.94
July	.82	.82	.94	.94
August	.82	.82	1.00	.94
September	.82	.82	1.15	1.00
October	.82	.82	1.15	1.15
November	.82	.82	1.15	1.15
December	.82	.82	1.25	1.15
Year	1.10	.82	1.25	.82

Mercury, Bisulphate

On November 9, 1903, the price was 55@57c.; October 18, 1911, 68@70c.; 1913, 43@47c.; 1918, July, $1.58.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$0.68	$0.68	$0.39	$0.39
February	.58	.58	.49	.39
March	.58	.51	.49	.49
April	.51	.51	.49	.49
May	.51	.44	.55	.55
June	.44	.39	.55	.55
July	.39	.39	.55	.55
August	.39	.39	.61	.55
September	.39	.39	.76	.61
October	.39	.39	.76	.76
November	.39	.39	.76	.76
December	.39	.39	.86	.76
Year	.68	.39	.86	.39

Mercury, Red Precipitate

On November 22, 1871, the price was $1@1.05; October 21, 1885, 70c.; 1891, 91@94c.; 1901, 96@98c.; 1911, $1.04@1.14; 1913, 79@89c.; 1918, July, $2.19.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$1.19	$1.19	$0.91	$0.91
February	1.10	1.10	.97	.91
March	1.10	1.03	.97	.97
April	1.03	1.03	.97	.97
May	1.03	.96	1.03	1.03
June	.96	.91	1.03	1.03
July	.91	.91	1.03	1.03
August	.91	.91	1.10	1.03
September	.91	.91	1.28	1.10
October	.91	.91	1.28	1.28
November	.91	.91	1.28	1.28
December	.91	.91	1.38	1.28
Year	1.19	.91	1.38	.91

Mercury, White Precipitate

On August 1, 1877, the price was 90c.; October 21, 1885, 75c.; 1891, 96c.@$1; 1901, $1.01@1.03; 1911, $1.09@1.14; 1913, 84@89c.; 1918, July, $2.29.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$1.39	$1.39	$1.06	$1.06
February	1.25	1.25	1.12	1.06
March	1.25	1.18	1.12	1.12
April	1.18	1.18	1.12	1.12
May	1.18	1.11	1.18	1.18
June	1.11	1.06	1.18	1.18
July	1.06	1.06	1.18	1.18
August	1.06	1.06	1.20	1.18
September	1.06	1.06	1.39	1.20
October	1.06	1.06	1.39	1.39
November	1.06	1.06	1.39	1.39
December	1.06	1.06	1.49	1.39
Year	1.39	1.06	1.49	1.06

Blue Mass, U. S. P.

On June 5, 1872, the price was $1@1.10; March 2, 1896, 33@34c.; October 18, 1901, 41@42c.; 1911, 46@48c.; 1913, 42@44c.; 1918, July, 95c.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$0.59	$0.59	$0.56	$0.56
February	.59	.59	.56	.56
March	.59	.56	.56	.56
April	.56	.56	.56	.56
May	.56	.56	.56	.56
June	.56	.56	.56	.56
July	.56	.56	.56	.56
August	.56	.56	.56	.56
September	.56	.56	.62	.56
October	.56	.56	.62	.62
November	.56	.56	.62	.62
December	.56	.56	.62	.62
Year	.59	.56	.62	.56

Mercurial Ointment

33⅓ PER CENT.

On August 1, 1877, the price was 40@50c.; October 21, 1907, 30@32c.; 1911, 42@44c.; 1913, 38@40c.; 1918, July, 93c.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$0.62	$0.62	$0.59	$0.59
February	.62	.62	.59	.59
March	.62	.59	.59	.59
April	.59	.59	.59	.59
May	.59	.59	.59	.59
June	.59	.59	.59	.59
July	.59	.59	.59	.59
August	.59	.59	.59	.59
September	.59	.59	.59	.59
October	.59	.59	.59	.59
November	.59	.59	.59	.59
December	.59	.59	.59	.59
Year	.62	.59	.59	.59

50 PER CENT.

On October 21, 1907, the price was 40@42c.; 1911, 52@54c.; 1913, 48@50c.; 1918, July, $1.30

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$0.77	$0.77	$0.72	$0.72
February	.77	.77	.72	.72
March	.77	.72	.72	.72
April	.72	.72	.72	.72
May	.72	.72	.72	.72
June	.72	.72	.72	.72
July	.72	.72	.72	.72
August	.72	.72	.72	.72
September	.72	.72	.80	.72
October	.72	.72	.80	.80
November	.72	.72	.80	.80
December	.72	.72	.80	.80
Year	.72	.72	.80	.72

Musk, Grain Cab

On May 29, 1872, the price was 50c.; October 18, 1881, $18@26; 1891, $11@32; 1901, $9@10; 1911, $12@15; 1913, $12@15; 1919, December, $28.

	1921.		1922.	
	Per ounce			
	H.	L.	H.	L.
January	$28.00	$28.00	$28.00	$28.00
February	28.00	28.00	28.00	28.00
March	28.00	28.00	28.00	28.00
April	28.00	28.00	26.00	26.00
May	28.00	28.00	26.00	25.00
June	28.00	28.00	25.00	25.00
July	28.00	28.00	25.00	25.00
August	28.00	28.00	25.00	25.00
September	28.00	28.00	25.00	25.00
October	28.00	28.00	25.00	25.00
November	28.00	28.00	25.00	25.00
December	28.00	28.00	25.00	25.00
Year	28.00	28.00	28.00	25.00

Opium and Derivatives

Opium Gum

On October 18, 1871, the price was $4; 1881, $3@3.12; 1891, $1.80@1.90; 1901, $3.12@3.19; 1911, $8; 1913, $5.75@5.90; 1917, May, $30.

	1921.		1922.	
	Per pound			
	H.	L.	H.	L.
January	$7.50	$7.50	$5.50	$5.50
February	7.50	7.00	5.75	5.50
March	7.00	6.00	5.75	5.75
April	5.50	5.50	5.75	5.75
May	5.50	5.50	6.00	5.75
June	5.50	5.50	6.00	6.00
July	5.50	5.50	6.00	6.00
August	5.75	5.50	6.00	6.00
September	5.75	5.50	6.75	6.25
October	5.50	5.50	6.75	6.75
November	5.50	5.50	6.75	6.75
December	5.50	5.50	6.75	6.75
Year	7.50	5.50	6.75	5.50

Crops and Prices for Gum Opium Since 1870

The following table shows the crops and the high and low prices for cases on spot since 1870:—

Year.	Crop, cases.	Prices	
		H.	L.
1922	*	....	....
1921	1,500	$7.50	$5.50
1920	*	....	....
1919	*	22.50	6.75
1918	*	30.00	21.50
1917	*	30.00	13.50
1916	*	13.50	10.75
1915	7,500	11.00	6.90
1914	7,500	10.00	6.00
1913	8,500	6.60	5.60
1912	6,500	8.50	6.00
1911	10,500	8.50	4.70
1910	4,800	6.00	4.80
1909	4,800	6.00	4.00
1908	4,650	5.75	4.05
1907	3,000	7.00	3.45
1906	7,500	3.50	2.72½
1905	3,700	3.30	2.72½
1904	11,200	2.95	2.62½
1903	3,200	3.50	2.70
1902	10,000	3.05	2.70
1901	5,600	3.45	3.00
1900	8,200	3.45	3.00
1899	6,400	3.37½	2.80
1898	9,000	3.75	2.70
1897	7,000	2.85	1.95
1896	3,600	2.40	1.90
1895	7,500	2.30	1.60
1894	4,500	3.25	1.85
1893	2,845	3.15	1.77½
1892	7,500	1.90	1.50
1891	7,400	2.25	1.75
1890	5,300	3.85	2.00
1889	5,500	3.40	2.82½
1888	8,700	3.87½	2.65
1887	7,800	4.60	3.25
1886	7,500	3.25	2.80
1885	7,000	3.90	3.30
1884	5,000	4.10	3.50
1883	6,500	4.12½	3.50
1882	5,500	4.50	3.87½
1881	10,000	6.25	3.90
1880	2,000	7.75	4.87½
1879	4,000	5.25	4.35
1878	5,500	4.70	4.25
1877	9,500	6.70	4.75
1876	3,280	6.60	4.75
1875	6,489	7.75	5.00
1874	2,300	9.00	5.00
1873	3,200	7.90	5.95
1872	4,500	7.90	6.10
1871	7,961	6.00	4.90
1870	4,273	9.40	5.25

* Due to the conditions brought about by the European war, no statistics or even estimates of the crop of gum opium were available for 1916, 1917, 1918, 1919 or 1920.

Opium, Granular

On November 22, 1871, the price was $7.40@7.50; October 18, 1881, $5.50; 1891, $2.80@2.85; 1901, $4@4.10; 1911, $8.65@8.75; 1913, $7.35@7.40; 1917, April, $33.

	1921.		1922	
	Per pound			
	H.	L.	H.	L.
January	$8.50	$8.50	$6.50	$6.50
February	8.50	8.00	6.75	6.50
March	8.00	7.00	6.75	6.75
April	6.50	6.50	6.75	6.75
May	6.50	6.50	7.00	6.75
June	6.50	6.50	7.00	7.00
July	6.50	6.50	7.00	7.00
August	6.75	6.50	7.00	7.00
September	6.75	6.50	7.75	7.25
October	6.50	6.50	7.75	7.75
November	6.50	6.50	7.75	7.75
December	6.50	6.50	7.75	7.75
Year	8.50	6.50	7.75	6.50

Opium, Powdered

On November 22, 1871, the price was $7.40@7.50; October 18, 1881, $5.50; 1891, $2.80@2.85; 1901, $4@4.10; 1911, $8.65@8.75; 1913, $7.30@7.35; 1917, April, $33.

	1921.		1922	
	Per pound			
	H.	L.	H.	L.
January	$8.50	$8.50	$6.50	$6.50
February	8.50	8.00	6.75	6.73
March	8.00	7.00	6.75	6.75
April	6.50	6.50	6.75	6.75
May	6.50	6.50	7.00	6.75
June	6.50	6.50	7.00	7.00
July	6.50	6.50	7.00	7.00
August	6.75	6.50	7.00	7.00
September	6.75	6.50	7.75	7.25
October	6.50	6.50	7.75	7.75
November	6.50	6.50	7.75	7.75
December	6.50	6.50	7.75	7.75
Year	8.50	6.50	7.75	6.50

Codeine, Sulphate

On December 20, 1897, the price was $3.95; October 18, 1901, $4.20@4.50; 1911, $5.40@5.55; 1913, $5@5.15; 1917, February, $11.

	1921.		1922	
	Per pound			
	H.	L.	H.	L.
January	$7.40	$7.40	$4.80	$4.80
February	6.60	6.60	4.80	4.80
March	6.60	5.60	4.80	4.80
April	5.35	5.20	4.80	4.80
May	5.20	5.20	4.80	4.80
June	5.20	5.20	4.80	4.80
July	5.20	5.20	4.80	4.80
August	5.20	5.20	4.80	4.80
September	4.80	4.80	5.85	5.85
October	4.80	4.80	5.85	5.85
November	5.80	5.80	5.85	5.85
December	5.80	5.80	5.85	5.85
Year	7.40	4.80	5.85	4.80

Morphine, Sulphate

On October 18, 1871, the price was $4.80; 1881, $3.65@3.75; 1891, $1.80@2.10; 1901, $1.76@1.85; 1911, $4.20@4.30; 1913, $4.20@4.30; 1917, October, $13.80.

	1921.		1922	
	Per pound			
	H.	L.	H.	L.
January	$5.90	$5.90	$4.90	$4.90
February	5.30	5.30	4.90	4.90
March	5.30	5.30	4.90	4.90
April	5.30	5.30	4.90	4.90
May	5.30	5.30	4.90	4.90
June	5.30	5.30	4.90	4.90
July	5.30	5.30	4.90	4.90
August	5.30	5.30	4.90	4.90
September	4.90	4.90	5.35	5.35
October	4.90	4.90	5.35	5.35
November	4.90	4.90	5.35	5.35
December	4.90	4.90	5.35	5.35
Year	5.90	4.90	5.35	4.90

Potassium Permanganate, U. S. P.

On October 18, 1901, the price was 9@11c.; 1911, 9¾@10¾c.; 1913, 9¾@10c.; 1917, July, $4.10.

	1921.		1922	
	Per pound			
	H.	L.	H.	L.
January	$0.60	$0.52	$0.16	$0.14
February	.52	.49	.16	.16
March	.45	.38	.16	.14
April	.38	.35	.14	.14
May	.35	.31	.14	.13
June	.29	.29	.14¾	.14¾
July	.29	.27	.14¾	.14¾
August	.26	.23	.14¾	.14¾
September	.23	.21	.16	.14
October	.19	.18½	.17	.16
November	.18½	.16	.16	.15
December	.16	.16	.15	.15
Year	.60	.16	.17	.13

Quicksilver

On October 18, 1871, the price was $63; 1881, $54; 1891, $46.50@48; 1901, $49.88@51; 1911, $47.25; 1913, $40.50; 1917, February, $140.

	Per flask of 75 pounds			
	1921.		1922.	
	H.	L.	H.	L.
January	$50.00	$43.00	$52.00	$48.00
February	50.00	46.00	51.00	48.00
March	46.00	45.00	50.00	49.00
April	46.00	45.60	55.00	49.00
May	47.00	46.00	55.00	55.00
June	47.00	46.00	55.00	55.00
July	46.00	46.00	55.00	55.00
August	46.00	42.50	60.00	57.00
September	42.00	38.00	69.00	63.00
October	40.00	38.00	72.00	71.00
November	46.00	40.00	72.00	71.00
December	52.00	46.00	74.00	70.00
Year	52.00	38.00	74.00	48.00

Quinine, Sulphate, American

(Manufacturer's)

On October 18, 1871, the price was $2.50; 1881, $1.85@1.90; 1891, 24@25c.; 1901, 28c.; 1911, 14c.; 1913, 23@28c.; 1918, May, 90c.

	Per ounce			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.70	$0.70	$0.60	$0.60
February	.70	.70	.60	.60
March	.70	.70	.60	.60
April	.70	.70	.60	.60
May	.70	.70	.60	.60
June	.70	.70	.60	.50
July	.70	.70	.50	.50
August	.70	.70	.50	.50
September	.70	.70	.50	.50
October	.70	.70	.50	.50
November	.70	.70	.50	.50
December	.70	.60	.50	.50
Year	.70	.60	.60	.50

Thirty-seven Years' Prices

	H.	L.
1922	$0.60	$0.50
1921	.70	.60
1920	.90	.70
1919	.90	.80
1918	.90	.75
1917	.75	.55
1916	.75	.50
1915	.55	.26
1914	.31	.26
1913	.26	.19½
1912	.19½	.14
1911	.14	.14
1910	.14	.14
1909	.15	.14
1908	.16	.15
1907	.22	.16
1906	.19	.14½
1905	.23	.19
1904	.27	.21
1903	.28	.23
1902	.28	.20
1901	.34	.27
1900	.37	.29
1899	.40	.21
1898	.25	.18
1897	.30	.15
1896	.27	.17½
1895	.28	.25
1894	.27½	.25½
1893	.25	.20
1892	.24	.20
1891	.30	.24
1890	.37	.32
1889	.40	.32
1888	.49	.40
1887	.61	.35
1886	.73	.49

Note.—Prices for bulk quinine salts based on sulphate for the years cited.

Quinine, Sulphate, Dutch

On November 18, 1901, the price was 26½c.; October 18, 1911, 13¼@13¾c.; 1913, 21@22c.; 1919, October, $1.60.

	Per ounce			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.67	$0.65	$0.60	$0.59
February	.64	.62	.59	.58½
March	.63	.63	.58½	.58
April	.65	.63	.58½	.58½
May	.68	.65	.59	.58½
June	.65	.65	.59	.50
July	.68	.65	.50	.50
August	.68	.65	.50	.50
September	.67	.65	.50	.50
October	.70	.68	.50	.50
November	.67½	.67½	.50	.50
December	.67½	.59	.50	.50
Year	.68	.59	.60	.50

Rochelle Salt

On October 18, 1881, the price was 25c.; 1891, 25c.; 1901, 16½@17½c.; 1911, 19@19½c.; 1913, 18@18½c.; 1918, August, 46½c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.31	$0.29	$0.19	$0.18
February	.29	.29	.18	.18
March	.29	.25	.18	.18
April	.25	.25	.18	.18
May	.25	.24	.18	.10½
June	.24	.23	.18	.18
July	.23	.22	.18	.18
August	.21	.20	.18	.18
September	.21	.20	.19	.18
October	.20	.19	.19	.19½
November	.19	.19	.19½	.19½
December	.19	.19	.19½	.19½
Year	.31	.19	.19½	.16½

Saccharine, Soluble

On December 11, 1905, the price was $1.50@1.75; October 18, 1911, $1.25@1.50; 1913, $1.25@1.50; 1917, August, $42.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$2.75	$1.70	$2.00	$1.90
February	2.25	2.25	1.90	1.90
March	2.25	2.25	1.90	1.90
April	2.25	2.25	1.90	1.90
May	2.25	2.00	1.90	1.90
June	2.00	2.00	1.90	1.90
July	2.00	2.00	1.90	1.85
August	2.10	2.00	1.85	1.85
September	2.10	2.10	1.85	1.85
October	2.00	2.00	1.85	1.85
November	2.00	2.00	1.85	1.85
December	2.00	2.00	1.85	1.85
Year	2.75	1.70	2.00	1.85

Salol

On August 20, 1894, the price was $3.05@3.10; October 18, 1901, $1.25@1.50; 1911, 85@90c.; 1913, 55@57½c.; 1917, January, $2.50.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.05	$0.90	$0.80	$0.75
February	.90	.90	.80	.80
March	.90	.90	.80	.80
April	.80	.80	.80	.80
May	.65	.60	.80	.80
June	.60	.60	.80	.80
July	.60	.60	.80	.80
August	.60	.60	.80	.80
September	.60	.60	.80	.80
October	.60	.60	.85	.80
November	.75	.60	.90	.85
December	.75	.75	.90	.90
Year	1.05	.60	.90	.75

Santonine, Crystals

On May 29, 1872, the price was $11@12; October 18, 1901, $5.25@5.50; 1911, $14.40@14.65; 1913, $26@26.50; 1920, May, $175.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$80.00	$75.00	$147.00	$147.00
February	88.00	80.00	147.00	147.00
March	104.00	98.00	147.00	147.00
April	110.00	110.00	167.00	167.00
May	122.00	112.00	167.00	167.00
June	123.00	122.00	167.00	167.00
July	123.00	122.00	167.00	167.00
August	122.00	122.00	167.00	167.00
September	126.00	122.00	172.00	167.00
October	135.00	126.00	172.00	167.00
November	145.00	142.00	172.00	172.00
December	147.00	142.00	172.00	172.00
Year	147.00	75.00	172.00	147.00

Seidlitz Mixture

On July 14, 1875, the price was 27@28c.; October 18, 1881, 23c.; 1891, 20c.; 1901, 13½@14½c.; 1911, 15½@16c.; 1913, 14½@15c.; 1918, August, 36.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.24½	$0.23	$0.18½	$0.17
February	.23	.23	.17	.17
March	.23	.21½	.17	.17
April	.21½	.21½	.17	.17
May	.21½	.21½	.17	.17
June	.21½	.20	.17	.17
July	.20	.20	.17	.17
August	.20	.20	.17	.17
September	.20	.20	.17	.17
October	.20	.18½	.17	.17
November	.18½	.18½	.17	.17
December	.18½	.18½	.17	.17
Year	.24½	.18½	.18½	.17

Sodium Benzoate

On October 18, 1901, the price was 44@46c.; 1911, 26@28c.; 1913, 23¾@24c.; 1917, January, $8.75.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.68	$0.68	$0.52	$0.52
February	.68	.68	.52	.52
March	.68	.68	.52	.52
April	.68	.65	.52	.50
May	.63	.55	.50	.50
June	.55	.55	.50	.50
July	.55	.53	.50	.50
August	.55	.55	.57	.55
September	.55	.55	.57	.55
October	.55	.55	.60	.57
November	.55	.55	.60	.57
December	.55	.52	.65	.57
Year	.68	.52	.65	.50

Strychnine, Alkaloid, Crystals

On May 29, 1872, the price was $2.75@3; October 18, 1921, $1.05@1.15; 1901, 55@80c.; 1911, 55@60c.; 1913, 50@60c.; 1920, April, $1.95.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$1.95	$1.95	$1.35	$1.10
February	1.95	1.95	1.20	1.20
March	1.95	1.95	1.20	1.05
April	1.95	1.95	1.05	1.05
May	1.95	1.95	1.05	1.05
June	1.95	1.95	1.05	1.05
July	1.95	1.95	1.05	1.05
August	1.70	1.70	1.05	1.05
September	1.70	1.70	1.05	1.05
October	1.70	1.45	1.15	1.15
November	1.45	1.45	1.15	1.15
December	1.45	1.45	1.15	1.15
Year	1.95	1.45	1.35	1.05

Sugar of Milk

On May 29, 1872, the price was 40@50c.; October 18, 1881, 28@31c.; 1891, 26@28c.; 1901, 13@16c.; 1911, 15@20c.; 1913, 16@17c.; 1919, January, 60c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.23	$0.22	$0.17	$0.17
February	.22	.22	.17	.17
March	.21	.20	.17	.17
April	.20	.20	.17	.17
May	.19	.18½	.21	.17
June	.18½	.17½	.21	.18
July	.17½	.17½	.18	.18
August	.17½	.17½	.19	.18
September	.17½	.17	.19	.19
October	.17	.17	.19	.19
November	.17	.17	.21	.19
December	.17	.17	.21	.20
Year	.23	.17	.21	.17

Tartar Emetic, Technical, Crystals

On May 29, 1872, the price was $1; October 18, 1911, 23½@25c.; 1913, 22½@23c.; 1917, November, 67c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.42	$0.37	$0.31	$0.31
February	.37	.34	.31	.31
March	.34	.34	.31	.31
April	.34	.34	.31	.31
May	.34	.34	.31	.31
June	.34	.34	.31	.31
July	.34	.34	.31	.31
August	.34	.34	.31	.31
September	.34	.34	.29	.28
October	.34	.34	.28	.28
November	.34	.34	.28	.28
December	.34	.31	.28	.28
Year	.42	.31	.31	.28

Thymol

On January 20, 1896, the price was $2; October 18, 1901, $3.15@3.25; 1911, $1.25@1.35; 1913, $1.65@1.70; 1917, November, $17.50.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$9.50	$9.00	$4.75	$4.70
February	9.00	8.50	4.30	4.30
March	8.00	7.50	4.30	4.30
April	8.00	7.00	4.25	4.25
May	7.00	6.25	4.25	4.25
June	6.00	6.00	4.40	4.25
July	6.00	5.75	4.45	4.40
August	5.75	5.50	4.45	4.45
September	5.50	5.25	4.45	3.90
October	5.25	5.25	4.25	4.15
November	5.25	4.90	4.00	4.00
December	5.00	4.90	4.00	4.00
Year	9.50	4.90	4.75	4.00

Vanillin

On October 19, 1890, the price was $3.75@4; 1901, 70c.@$1; 1911, 33@36c.; 1913, 33@36c.; 1918, August, 90c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.65	$0.65	$0.58	$0.54
February	.65	.60	.54	.54
March	.62½	.60	.54	.54
April	.60	.55	.54	.54
May	.55	.50	.54	.54
June	.50	.48	.54	.48
July	.50	.50	.48	.43
August	.50	.50	.43	.43
September	.50	.50	.43	.43
October	.50	.50	.43	.43
November	.60	.58	.43	.43
December	.58	.58	.43	.43
Year	.65	.48	.58	.43

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Botanical Drugs: Market Review

The botanical crude drug market divides naturally into two principal divisions—imported plant drugs and those of domestic origin. In considering the past year in this market, each division will be taken up separately as the influencing factors, though similar in some ways, are more or less individual with the division they affect.

A preliminary survey of the entire market may provide the proper basis for the more detailed discussion that is to follow. In the main, the market was firm to strong throughout the year. While business showed little of unusual or startling character, there was a steady gain in volume and profits throughout the past twelve months. The drift of prices was upward for the most part, and the periods of real weakness were few and far between. In a very real sense, it can be stated that weakness in the market as a whole was virtually unknown. Most of the strength displayed throughout the year was directly the result of production versus demand, with production the predominating element.

Domestic Opinion Divided

So much for a general statement. Consideration will now be given the situation in American botanical drugs. Early in the year, stocks held in New York were fair in size, and representative of the entire line of domestic crudes. Practically all dealers reported supplies to be rather larger than might be expected, and hence they were not particularly active buyers of replacement stocks from the primary market.

This gave rise to the opinion that holders and collectors in the country might find their supplies to be more or less "frozen." It was intimated that the country had a fair-sized carryover on hand from the collection season of 1921, and that, owing to the fact that dealers here were not active in primary market purchases, the sellers at the source of supply might be inclined to attempt stimulation of dealers' activity by means of naming somewhat lower prices.

Such was the opinion on spot, at least. From the country another tale came out. It related that, contrary to the belief of many, the unsold portion of the crop of 1921 was over-estimated and that the collectors were far from carrying anything like a large stock of merchandise. Warning was given that the country dealers not only would not reduce prices to any general extent, but that, on the contrary, conditions suggested that they would actually advance them.

There the matter rested for the greater part of the first quarter. Values did not give way in the primary market, nor did dealers on spot find demand expanding so rapidly as to force them to the country for liberal replacement stocks.

The lethargic character of demand on spot did cause the market to develop a downward tendency in prices. Following the opening of the year, there was some tendency to price local stocks at lower prices on such goods as the inventory had found to be oversupplied.

This tendency was intimately connected, later on, with the lack of demand caused by the fact that consumers did not break away from hand-to-mouth buying; they continued to restrict their takings to a volume close to actual requirements. There was no anticipation of future requirements to speak of.

At the end of the first quarter, then, the primary market was found to be holding up firm at practically unchanged prices, and showing more inclination toward the raising of prices than toward a reduction of the same. Demands to the country were light. The spot market was more or less dull, with demand at a minimum and prices showing reaction downward as a natural result.

Trend in First Quarter

The following tabulation will illustrate concretely exactly what happened to some leading domestic crudes during the first quarter:—

Article.	Jan. 1.	Mar. 31.
Aletris root	$0.34	$0.30
Balm of Gilead buds	.50	.45
Black haw bark of root	.24	.24
Cannabis, U.S.P., cultivated	.30	.30
Culver's root	.15	.15
Elm bark, selected	.30	.26
Golden seal root	3.25	3.00
Helonias root	.38	.45
Lady slipper root	.62	.62
Lobelia herb	.12	.09
Mandrake root	.11½	.12
Pink root	.75	.75
Sassafras bark, selected	.23	.19
Senega root	.80	1.10
Skullcap, Eastern	.22	.22
Wahoo bark of root	.55	.55

In the above tabulation, the price movement in senega root and elm bark deserve special treatment. Senega root showed a rise of 30c. during the first three months of the year. This was exactly contrary to the expectations of some and rather against reports that at one time were circulated on spot. These reports were to the effect that so large a collection of this article had taken place that Winnipeg, the principal selling market, was heavily stocked and that the cheapest senega in years was in prospect.

This turned out to be propaganda of the rankest sort, for if collection was liberal the supplies were centered in mighty strong hands—principally banks and fur dealers. At the time when the bearish talk was circulated, the primary market merely sat tight and awaited developments. The strength of that market was indicated by the fact that during the first quarter of the year the article never sold below 75c. locally.

A rise to $1.10 per pound took place in February. This was enough to stamp the brand of spurious on the earlier reports that predicted low prices. Demand for export came in fairly lively during February and prices bounded up briskly. When it was satisfied, prices declined again to 75c. to await the next demand. It came in March, when the market again advanced to $1.10 per pound, and at which point it hung throughout that month. There was real scarcity of spot material experienced at that time. Of course, this movement but indicated the real strength in the primary market and illustrates fairly well a condition that was claimed by primary market sellers to exist in nearly all domestic crudes at the source of supply. The difference was merely one of degree.

Elm bark declined and largely because this item in the primary market proved to be an exception to the general rule of firmness in prices and limited stocks. There proved to be a good supply in the country, and it was sufficiently heavy to be unable to withstand the lack of demand that was a feature of the season when consumption ought to have been at its height.

In fact, the failure of consumers to buy this article last year was a feature of the market. Spot sellers stocked liberally of the new crop in anticipation of a good demand. Broader buying was thought almost certain to occur, as, in 1921, there has been a constantly falling market and consumers were not large buyers at any time. This suggested that they were carrying little reserve and would have to buy elm bark during the season of 1922.

It was a pretty bit of logic, but buyers upset it entirely by being out of the market almost entirely. The spot could not stand the strain nor could the primary market holders. Selected bark of fine quality came out first lightly and eventually in something like a torrent.

Prices broke gently during the first quarter, dropping 2c. in February and 2c. more in March. In the second quarter the real break came that brought the spot market to its low point for the entire year.

The rest of the tabulation presented above holds little worthy of special comment. However, the firm character of prices on black haw bark of root, lady slipper root and wahoo bark of root may be noted especially at this time, owing to the developments that occurred later in the year. There was practically no demand for these articles in the first quarter, but prices on spot and in the country failed to give even the fraction of a cent.

The rise in helonias, of course, stands out from the general downward tendency in most prices. This was occasioned by real scarcity of the item, and leading sellers of the article declared early in the year that consumers would be faced with small stocks and rising prices practically throughout the year. Their declaration proved to be correct in the main.

Weakness in Second Quarter

The second quarter of the year found the weak characteristics of the spot market asserting themselves more actively. During the first quarter, as shown by the tabular matter above, seven articles held unchanged, six showed a decline, and three advanced. In the second quarter, six were unchanged, nine declined, and one advanced. It cannot be said that the primary market in any measure followed the downward trend in prices. On the contrary, values in the country were maintained more or less successfully.

Demand proved to be disappointing in the main on spot. Consumers expanded their takings conservatively, but nothing like a buying boom was even remotely suggested in the market as a whole or in individual items. The result was to emphasize the firmness of primary markets as compared with the spot.

Sellers in the country were inclined to hold aloof from the spot, convinced of the ultimate value of their merchandise because of the fact that supplies in the country were burdensome.

Of course, there was a more or less steady demand from the consuming trade and it was satisfied on spot without a great deal of trouble. This meant a more or less steady shrinkage in the spot supplies. The important fact right here is that this shrinkage went on without dealers replenishing their stocks materially from the primary market.

This relieved the country from a pressure of orders, but eventually it also brought about on spot an important condition in the growth of business as between spot dealers. As a general thing, when a dealer had exhausted his supply of an article inquiry at the source of supply revealed a higher country price than the prevailing value on spot. Naturally, the dealer needing a small stock to fill immediate orders bought where he could buy cheapest, on spot, in other words.

In a sense this amounted to a reduction in unsold goods on spot and caused the shrinkage of holdings to create a potentially stronger market here.

Thus, at a time when prices were rather on the downward trend, there was growing up a situation that eventually gave promise of making a strong spot market because of undersupply here and the necessity of paying the prices asked in the country.

There is tabulated next below the progress of some of the more important domestic crude drugs during the second quarter; it should prove illuminating:—

Article.	April 1.	June 30.
Aletris root	$0.30	$0.30
Balm of Gilead buds	.45	.45
Black haw bark of root	.24	.22
Cannabis, U. S. P.	.30	.30
Elm bark, selected	.25	.20½
Golden seal root	3.25	3.25
Helonias root	.45	.48
Lady slipper root	.62	.59
Lobelia herb	.09	.08½
Mandrake root	.12	.11
Pink root	.75	.70
Sassafras bark, selected	.19	.19
Senega root	1.00	.90
Skullcap, Eastern	.22	.20
Wahoo bark of root	.55	.52

It was stated above that the real break in selected elm bark came after the first quarter of the year. During the second, values went down 4½c. per pound. While in extent the break was but ½c. greater than it was in the first quarter, the 4½ decline meant a whole lot more than did the 4c. in the first quarter. It brought the local market down to the lowest price since April, 1919, in which month it sold at 19½c. per pound. In the interim between April, 1919, and the end of 1922 it actually sold as high as 90c. per pound. Of of 1922 was due to the very poor demand against a liberal stock held in the country and on spot as well.

Helonias root continued to display those features that caused sellers in the first quarter to predict much higher values throughout the balance of the year. Prices rose somewhat on spot and considerably in the country. There was real scarcity in the replacement market and very little was held on spot by spot competition more than anything else. The lower prices on skullcap Western were also interesting because of the subsequent devlopments. Mandrake root was very steady on the whole, although there was some relaxation among first hands, and was caused course, the decline during the first half save in strong hands, who anticipated larger profits later in the year and hence were not anxious sellers.

The decline in wahoo bark of root was important because of later developments. The reduction was made almost without relation to the situative selling from the country. Blackhaw bark of root was driven down under competition at a time when the primary market situation hardly suggested that necessity of such a move. Later movements in prices substantiated this.

At this time—and, in fact, throughout almost the entire year—it seemed as though the spot dealers had but little conception of the extent of competitors' supplies. The trend of events later in the season, especially after another collection season has passed, more or less clearly indicated that only occasionally did a dealer come to realize that he had virtually the only supply of a given article. This fact during the first quarter of the year rather pointedly indicated the conservative quality of consuming demand. In many instances one seller on spot had a virtual corner on some article, but the lack of demand failed to reveal to him his position of advantage.

Because of the stronger and advancing market that developed in the third quarter of the year it may be well to recall the market conditions ruling at the first of the year.

At that time the attitude of primary market sellers was one of independence. They indicated that the holdover stock from the crop of 1921 was not so large as to be a burden and that they believed that the supplies in hand would prove to be very valuable and that they would hold until they got prices considered by them to be right.

On the other hand, spot dealers found demand light and stocks in good shape on spot. They believed that primary market values were too high, demand considered, and looked for reductions. Prices showed a softening tendency on spot that contrasted sharply with the firm views held at the source of supply. They backed up this view by restricting their takings from the country and relying on competitors to supply needed items. As spot prices were somewhat lower than those named in the country, this led to a large trade between dealers.

Third Quarter Brought Strength

With the background of the first of the year re-established, the activity of the market in the third quarter of the year resulted in a more or less thorough confirmation of the views held by primary market sellers early in the period.

First let it be pointed out that in the list of leading American crude drugs that is being studied specifically through tabular presentation of their price movements the third quarter recorded sharp advances. During that period the table below will show that twelve articles—more than 50 per cent. of the entire group—advanced, two declined and two held unchanged. This comparies with three advances, six declines and six without change, as the record for the second quarter.

The table below indicates the progress of the market against buyers and in favor of sellers:—

Article.	July 1.	Sept. 30.
Aletris root	$0.30	$0.53
Balm of Gilead buds	.45	.43
Black haw bark of root	.22	.28
Cannabis, U.S.P.	.30	.30
Culver's root	.15	.19
Elm bark, selected	.20½	.27
Golden seal root	3.40	3.50
Helonias root	.48	.58
Lady slipper root	.59	.59
Lobelia herb	.08½	.10½
Mandrake root	.11	.16
Pink root	.70	.95
Sassafras bark, selected	.18	.21
Senega root	.80	.75
Skullcap, Eastern	.20	.35
Wahoo bark of root	.52	Nominal

These movements and conditions prevailing in prices are more or less typical of the undertone pervading the domestic crude drugs as a whole during the summer months. The fact that advances predominated in the more important American crudes during the period of the year when business is expected to fall off because of summer dullness was especially significant.

Business did fall off; in fact, demand throughout the heated term was at a minimum, and practically no trading save in a jobbing way took place. But, despite this, prices held firm to an upward tendency and values worked steadily up even without the pressure of important buying.

This absence of buying gave rise to a policy of replacement that eventually worked the market into even stronger position. As dealers on spot had but a moderate demand to fill, the local holdings were sufficient in most cases to take care of a major part of the business coming in. Therefore, dealers were not forced to buy for immediate delivery and kept their prompt shipment purchases down to a minimum.

In the meantime, they did have to look ahead to their requirements for the fall and winter season. Although the New York market showed a pronounced upward trend, dealers determined to keep down first costs in the country. As a result, the price lists posted by the leading collectors were interesting to say the least. The old men, women, children, itinerant colored labor, indigent "white trash" and the like were offered for their labor a schedule of low prices that utterly failed to stimulate a liberal collection of domestic crudes. The collection season for most botanicals is naturally in the summer months. The summer of 1922 was a period of advancing prices in New York and low or declining prices as paid to the laborers who actually gather the botanicals.

This reduced collection, naturally. Other forms of labor paid much higher returns and, as the cost of living had declined hardly at all, those able to do more laborious tasks were virtually forced to do so in order to keep body and soul reasonably close together. The collectors, therefore, sent out reports that collection was proving to be disappointing and that the New York dealers would have to pay higher prices, as supplies would be much reduced.

This did not tend to make dealers in New York very heavy buyers in the country as far as those items obtainable on spot were concerned. The trading between dealers expanded and naturally carried spot prices upward.

Because of all the conditions outlined above, the fall opened with the market in a firm to strong position. Stocks were limited, the primary market had firm convictions as to values, and prices exhibited a strong undertone and a tendency toward advance. Many advances were achieved, but, on the whole, the trade admitted that a strong swing to much higher levels—levels declared to be justified by the state of supply and the replacement costs—waited on the expansion of demand.

The awaited demand did not materialize save in a very moderate degree. Business throughout the country was upset by two serious conditions affecting labor—the railroad shopmen's strike and the coal strike. The latter started in April and resulted in real shortage of coal. The former tied

up freight movements, discouraged buyers of finished products because of the uncertainty and delays in the movement of freights. This naturally reacted on the demand for raw materials and consequently kept business at a low ebb for almost all of the second semester of 1922.

Botanical drugs were affected to a marked extent. The manufacturer of proprietary medicines and pharmaceutical preparations found demand for his product declining and the unsold stocks increasing as production went ahead, while consumption was crippled badly or died out almost entirely. Consequently, such manufacturing consumers reduced their buying interest in raw materials.

Coupled with this national affliction was the uncertainty as to what tariff act would be passed and when. Business stood wavering and irregular, awaiting something definite in the way of tariff enactment, while the Congress mulled the thing over and over. Washington did not deliver a signed tariff enactment until September 21, 1922, when President Harding fixed his signature to the document at 11:10 a. m.

It has been said that during the third quarter of the year American botanical drugs were in firm position and showed an advancing trend quite out of keeping with the general quiet condition of business. Collection in the primary market promised to be disappointing, which gave rise to the belief that consumers would have to pay higher prices when they did come in for fall requirements.

Upward Trend in Last Quarter

The last quarter of the year more or less justified the expectation by the event. A close study of the price changes during October-December shows that sixty-six domestic botanicals advanced and forty-seven declined. By far were the advances the more important, as they came in important materials, while the declines were named on those of rather less importance.

During this period business showed expansion. The consuming trade took more liberally than they did earlier in the year, and this caused the crude drug trade in New York to achieve a very satisfactory showing for the twelvemonth ended December 31.

The collections in the country actually did prove to be less than many hoped for. This was largely due to the low prices paid the workers and the difficulty in getting regular collection. This kept country sellers firm in their views and caused them to advance prices as a general rule.

The list of important domestic botanicals that has been followed throughout the year more or less confirms the above. There were ten advances, four declines and two that held without change.

The tabulation is as follows:—

Article.	Oct. 1.	Dec. 31.
Aletris root	$0.53	$0.60
Balm of Gilead buds	.43	.45
Black haw bark of root	.28	.40
Cannabis, U. S. P.	.80	2.00
Culver's root	.19	.75
Elm bark, selected	.27	.25
Golden seal root	3.50	3.20
Helonias root	.58	.55
Lady slipper root	.50	.50
Lobelia herb	.10½	.14
Mandrake root	.16	.16
Pink root	.95	1.05
Sassafras root, selected	.21	.20
Senega root	.75	.77
Skullcap, Eastern	.35	.50
Wahoo bark of root	Nominal	1.25

The most important advances made in the fourth quarter of the year came in black hawk bark of root, cannabis, U.S.P., Culver's root, senega root, eastern skullcap and wahoo bark of root.

These advances were the direct outcome of the conditions treated in detail earlier in this review. Stocks in New York dropped close to the exhaustion point. In Culver's root this was especially true. A few pounds alone stood between a little supply and none at all. Attempts to replace in the country produced but the smallest kind of offerings. The same statement would go for the rest of the just mentioned articles. Of course the entire story is not told by the tabulation, as in several instances goods actually sold at prices higher than the range indicated. For example, at one time early in the quarter, senega root actually sold for export at 80c. per pound.

Even in the articles showing a reduction in cost there was little real weakness, as indicated shortly after the turn of the year, when prices stiffened up materially—on elm bark, for example.

The year closed with the market in firm position. The inventory period did not prove to be one of weakness as to prices. Stock sheets failed to show very many "long" items, and hence bargain offerings were not thrust forward in an effort to reduce overstocked goods; they did not exist. Also, dealers passed by almost entirely the lack of business usually associated with the taking of inventory. Knowing the firm state of the market because of the undersupplied spot and primary market, dealers were entirely willing to await demand and made little or no effort to stimulate buyers into action by the seduction of shaded prices.

Trade feeling was decidedly optimistic for the new year and it was felt that prices were properly placed, that inflation existed hardly at all and that many articles were so strongly placed as to make higher prices a certainty. This was especially true as concerned imported botanicals.

Index Number for the Year

As a final presentation of the year as affecting the important domestic crudes which have been followed closely, the following index number on the same may clinch the understanding of the situation:—

Index Number on Important Domestic Crudes

Normal—60

1914, August 1,	1922, January 1,	1922, December 31,
61.6	55.3	79.8

In some respects the situation on spot as regards imported botanical drugs paralleled that in domestic crudes. For example, the drift in prices was toward firmer position on most items and to higher levels on some. There was undercollection of botanicals in Europe and the selling views of the foreign merchants grew steadily firmer throughout the year. The offset of this tendency was the depressed and unstable condition in European exchanges. Buyers were not strong takers of supplies as a whole, but instead kept down their purchases close to actual requirements. This tendency was paralleled by the importers here, who failed to enter liberal replacement orders but followed demand closely, covered in a measure commensurate with requirements and depended on competitors to help out on needed items when supplies of the same were exhausted and replacement was not deemed wise or expedient. Trading between dealers provided a fair share of spot activity, especially as the year drew to a close.

Imported and domestic botanical drugs had most of the above conditions in common, but they were influential only in varying degree. The departure from common conditions was largely due to exchange conditions. Shippers abroad were able to obtain their supplies from the gathering districts at low prices, owing to the almost worthless money with which the workers were paid. The profits to the shippers were large, as they were paid in dollars, while they bought in marks, kronen, lire and other discounted currency.

Exchange Made Foreign Bargains

The prices named to this country were often high in appearance, but actually low when the bill was paid. This was due to the fluctuating character of international exchange that allowed importers oftentimes to cover their indebtedness on the downward dips in exchange rates.

The chance to buy cheaply was oftentimes enough to force importers into transactions because of apparent bargains. The situation in replacement costs of domestic crude drugs held no possibilities such as those just mentioned, and hence bargain purchases were rare in home grown materials.

The strength of some materials was marked. For example, Spanish saffron went through a year of record prices and closed the twelve-month under a strong propelling power that gave promise of even higher rates during the new year. The strength in the article rested in the small spot stocks, the conservative replacement purchases of importers and underproduction in Spain.

Burdock root was another special item. There was excellent buying of the article on spot throughout the year. Importers depended on one another more and more for supplies as the foreign markets steadily advanced and as collection and stocks dropped down. At the end of the year the spot holding was concentrated on the hands of one seller, and he pinched the price to a high point and held it there. Roman chamomile was placed in a situation identical with that in burdock root and for the very same reasons. Other botanicals in nearly if not quite the same category were dragon's blood reeds, henbane leaves, Mexican vanilla beans, aconite root, and selected lavender flowers.

The situation in Mexican vanilla was especially interesting. The shortest crop in the history of Mexican vanilla came in 1921-1922, the total production being not in excess of 60,000 pounds as compared with a normal crop of 350,000 pounds. Prices naturally reacted upward and by the close of the year the market was bare of supplies and a nominal situation in effect. Coupled with the shortage in Mexicans was a sharp curtailment of the crop of Bourbon beans in the Far East, and while the prices on Bourbons did not advance sharply because of exchange and other conditions, the market for Bourbons was strong in undertone and upward in tendency.

In lavender flowers, real and acute shortage occurred in midsummer, when all except a few pounds of the poorest quality of lavender flowers had been sold and nothing could be obtained from abroad at any price. The poorest of poor flowers actually sold as high as 45c. per pound during the period of shortage.

Insect powder was a quiet article for the greater part of the year. There was a slight rise in prices during the first quarter, a reaction downward in the second, recovery in the third, and a strong, advancing market during the fourth. The rise was due to the shortage of flowers in Dalmatia and the stern control of values established by the Japanese. Late n the year the offerings of flowers declined in volume and prices on powder advanced briskly, until by the close they were twice as high as they were January 1, at which time 35c. per pound was asked.

Jalap root was also an article that performed almost exactly the same as insect powder, so far as price movement was concerned. On January 1 13c. per pound was considered a good price to get for Jalap root; on December 31 it was almost impossible to get a pound at any price. There was one holder of one small lot, and for it he wanted 34c. per pound. The trouble was down in Mexico, where collection proved bad and importers could not supply the American trade with any but the smallest quantities of the article, and then only at constantly advancing prices.

Of course, some items in the foreign list displayed weakness. These included lycopodium. Supplies of Russian goods flowed out heavily through Hamburg and the local market was soon filled with a lot of cheap material. Prices were on the down grade throughout the year. In January $1.30 per pound yas quoted, but in December sellers were glad to book business at 48c. per pound and eventually—after the turn of the year—the stuff actually sold down as low as 40c. per pound.

Ergot was another such material. There was trouble with the Spanish crop last summer, but out of Russia came, through Hamburg again, a stock of Russian ergot that was sufficient to set the Spaniards by the ear, caused them to cut the market, and to turn prices directly in favor of the consuming trade. From a price of $1.07 per pound in January, ergot declined steadily to an end-of-the-year quotation of 62c. per pound. There actually were sales as low as 58c. per pound during the last quarter.

Mexican sarsaparilla root was also under pressure. The article started 1922 at 42c per pound; it ended the year at 23c. per pound and was by no means steady at that level. The reason for the decline was clearly due to the weakness of the article in Mexico, where a large crop was collected at low prices.

Trend of Foreign Drugs

In a determination to show the course of thirty of the leading imported crude drugs throughout the year, the following table will serve. The plus and minus signs affixed to the December prices indicate the values to be higher or lower in comparison with the beginning of the year.

Article.	Jan. 1.	April 1.	July 1.	Oct. 1.	Dec. 31.
Aconite root	$0.20	$0.20	$0.21	$0.23	$0.35+
Arnica flowers	.11	.10	.08½	.08	.14+
Belladonna root	.14	.12	.11	.11	.11—
leaves	.14	.11	.11	.12	.16+
Buchu leaves	1.12	.95	1.10	.92	1.10—
Buckthorn bark	.08	.06½	.07	.07	.06—
Burdock root	.10	.10	.10	.16	.27+
Chamomile flowers, Roman	.90	.80	.70	.65	1.30+
Hungarian	.21	.19	.28	.28	.19—
Cinchona bark, quills	.40	.30	.30	.40	.40
Dandelion root	.08½	.08	.07½	.07½	.10+
Digitalis leaves	.10	.08	.07	.06½	.06½—
Dragon's blood reeds	.75	.68	.08	.80	2.50+
Ergot	1.07	1.00	1.03	.63	.62—
Henbane, leaves	.22	.22	.65	.48	.42+
Henna, leaves	.18	.17	.17	.22	.21+
Insect powder	.36	.53	.42	.51	.70+
Ipecac root, Cartagena	1.85	1.75	1.55	1.55	1.50—
Jalap root	.13	.15	.18	.19	.34+
Lavender flowers, select	.37	.35	Nom.	Nom.	.35—
Licorice root	.06	.08	.06	.06½	.08½+
Lycopodium	1.30	1.05	.80	.75	.48—
Nux vomica, powder	.15	.12	.09	.11	.11—
Rhubarb root	.13	.80	.55	.45	.45—
Saffron flowers, Spanish	15.75	26.00	27.00	31.00	34.00+
Sarsaparilla root, Mexican	.42	.45	.37	.29	.23—
Stramonium leaves	.13	.10	.09	.07½	.07—
Tonka beans, Angostura	1.35	1.20	1.20	2.00	2.15+
Valerian root	.10	.09	.11	.13	.12—
Vanilla beans, Mexican	7.50	8.50	10.00	11.00	11.00+

From the above it may be learned that but one article ended the year where it began, namely, cinchona bark, which opened and closed at 40c. per pound, but which at one time sold as low as 30c. per pound. Seventeen of the articles listed closed the year higher than they began it, and the significant feature of the advances was the violent character of most of them. Twelve articles showed a lower year-end level of price as compared with the beginning.

Another result of close study of the presentation is the following index number comparison of normal prices—those of January 1, 1922, and those of December 31, 1922:

Index Number of Important Imported Crudes

1914, August 1.	1922, January 1.	1922, December 31.
94.6	117.3	196.6

Most of the above indicated strength developed during the second semester of the year, the greater part of the advances coming in the last quarter. The higher prices were largely the result of small spot stocks and an expanding demand that forced dealers to an increased amount of trading one with the other. Many of the needed items could not be obtained abroad, and all of them were to be had only at relatively higher prices than dealers here thought were safe from the standpoint of a liberal replacement of exhausted stocks.

The heavy trade between competitors naturally worked to reduce spot supplies, and there are numerous instances of spot stocks being held by but one dealer. Notable examples of this are found in aconite root, burdock root, Roman chamomile flowers, dragon's blood reeds, henbane leaves, jalap root, Spanish saffron flowers, Mexican vanilla beans, and lavender flowers.

Such a condition of affairs was more than sufficient to cause stiff advances in price, regardless of the amount of buying by the consuming trade. That did expand during the last quarter of the year, but the amount of goods taken were hardly sufficient alone to cause the upheaval of prices. But the buying did add to the general merriment of price advances caused by the shortage of spot stocks and the limited foreign offerings.

The conservative operations of buyers were due, in part at least, to the rail strike and the delay in tariff enactment. The rail strike and its effects have already been discussed in the review of domestic botanicals.

The New Tariff

The tariff act of 1922 became effective on September 21, when President Harding attached his signature to the document.

The new act did little of a radical character as far as crude drugs went. The seeds were most vitally affected, as the tariff makers put through a seed and spice schedule calling for much higher duties.

Such changes in duty as were made were generally to higher levels. Licorice root was raised to ½c. per pound, being higher by ¼c.; belladonna, digitalis, henbane, and stramonium were dutied at 25 per cent. ad valorem, having been previously entered free if in an unadvanced state of condition; dandelion was put in at 1½c., whereas it previously came in free if not used as a coffee substitute; lemon and orange peel formerly came in free, but under the new act was dutied at 2c. per pound.

The assessment of 25 per cent. ad valorem on belladonna, digitalis, henbane, and stramonium was a direct result of the war. During the war period, European production, or rather collection of these drugs was reduced to a minimum, and eventually shipments to the United States dwindled to zero. This gave rise to domestic cultivation of the enumerated drugs, and under war conditions the industry was remunerative to the growers. Once the shipments from Europe were resumed the cost of growing here made cultivation unprofitable.

Because of this, some parties interested in domestic cultivation succeeded in getting the duty assessed. It made little difference in the cost of importation, however, as the low cost of the articles abroad more or less offset the duty charged.

From the above it may be surmised that the tariff had little effect on the crude drug market save to upset it for a time and to cause some annoyance and inconvenience to importers. It added little if any, to the cost of the articles to the consuming trade.

Most of the tariff effect was felt prior to the enactment of the measure. For a long time, the Congress delayed action, backed and filled on the proposition, held hearings, listened to protests, went through a lot of motions that did little good to business in this country. There was uncertainty as to what would be done, and this reacted on buyers to the extent of making them extremely cautious in going ahead and covering raw materials. Once the bill became a law, the net effect on imported crude drugs was as presented just above.

On the whole, the year in botanical drugs, both domestic and imported, was satisfactory. When balance sheets were struck after the turn of the year, dealers admitted that few items showed on the red ink side of the paper. Real profit were made, and this gave sellers confidence in the future. It was felt that 1923 could hold little but good for the trade, as conditions surrounding supply were strong—pointing toward limited stocks—and this gave promise of steady and probably advancing prices.

Summary of Price Trend

A final view of the botanical year may be gained from the following tabulation of index numbers. They are drawn from the Reporter, and are based on the weekly price changes named on forty representative botanical drugs—twenty foreign and twenty domestic:

Reporter Botanical Index Numbers

Normal 60—August, 1914.

	1922.	1921.
January 1	79 9	126.7
February 1	80.8	87.9
March 1	80.2	85
April 1	104.2	84.1
May 1	106.1	82
June 1	106.2	82.8
July 1	106.3	78.4
August 1	106 8	77.3
September 1	106.1	74.8
October 1	114.8	76.1
November 1	117.3	75.6
December 1	122	76.3
December 31	122.5	79.9

Tahiti Vanilla Market

During 1922 the Tahiti vanilla bean market held firm, prices ranging as follows:—January, $1.40 to $1.90; June, $1.50 to $2; December, $1.60 to $2, with a firm indication that the demand was such that prices would still hold higher.

Some fifteen hundred tins of beans were imported during last year into San Francisco, which indicate approximately the entire shipments to the United States, with a small portion to New York direct, but the largest amounts were consumed by Australia and France, due to the high prices which these two countries could pay and also to the great demand from Europe.

Visitors to Tahiti say that careful study of the situation discloses that a pest killed many vines during the past two years, and that it will probably be another year before the vines are again planted on the island, the pest having been almost killed.

The greater portion of these beans are grown on the Island of Raiatea, with some on Maurea, but the distributing point is Papeete, under inspection of the French Government, which during the last six months of 1922, on account of various complaints from the United States and France, took a hand in the inspection before shipment. Therefore, the beans are now arriving in better condition and can be classed only as A-1 quality whether they are the "green," "yellow," "white" or "pink" label. The French reject all beans that have not been thoroughly cured. This has consequently raised prices to some extent, as it takes longer to cure the beans in order that they may pass the inspection of the customs officials. Heretofore they could be shipped regardless of the length of time they had been in the process of curing and this caused a considerable amount of what are known as "rejects" to come to the American market.

During the course of the last four months of 1922, 300 to 400 tins of beans a month were arriving at Papeete, the majority of them being shipped to other continents. Indications were that the same amount of vanilla would be produced for the next two months. As to the next year's supply, it is hard to foretell exactly the conditions, as it is understood that the pest has arrived at Raiatea and this will probably damage the crop to a large extent.

Peppermint in 1922

ST. JOSEPH CO., Mich., Mar. 1, 1923.

In January, 1922, everything looked favorable for a bumper peppermint crop. But as spring came it was found early in March that the roots had been injured during the winter, and as spring advanced this condition was augmented by excessive rains; the new planting was curtailed and in many places it never came up. Folowing the excessively wet spring was a very dry summer.

These unfavorable conditions shortened the 1922 crop so that it was not over one-half what it otherwise would have been. Of course, these adverse conditions brought the price of peppermint up before the new crop was ready to distill.

Judging from the way the 1922 crop was turning out dealers in the West thought oil would go to $4 per pound, but after some very urgent requirements were filled early the price began to drop. When oil did reach the low point not much was sold by growers, and since then any little activity in buying causes prices to fluctuate considerably.

There are still five months until the new crop is available, and there is only about 70,000 pounds with the growers. In spite of this strong position a decline in the near future would surprise no one, because certain weak operators have been buying and selling peppermint the last couple of years and they probably will continue handling part of the 1922 crop at a loss. The holdover from 1921 was considerable, but no one believes it was enough to make up the shortage in 1922.

Golden Seal in 1922

MADISON, Ind., March 1, 1923.

The production of golden seal root in the United States in 1922 was about the same as in 1921. There was a larger yield of cultivated, but much less of wild. The yield of wild is constantly lessening, while on the other hand the production of cultivated is increasing and is expected to continue to increase until it reaches a stage of over-production, such as there was in the cultivation of ginseng a few years ago.

The consumption of golden seal root during 1922 was apparently less than in the previous year—at least, sales were less—but some believe the actual consumption was not less, 1921 having been a year of such deflation that consumers did not lay in large stocks in 1922, but pursued a hand-to-mouth program, buying only when necessary, for fear the price would go down still lower. Of course, foreign demand was, to some extent, curtailed on account of the chaotic condition existing in Europe.

The outlook for this year as to price depends largely on production, as the demand and consumption will at least be equal to what they were in 1922.

Other crude drugs which are gathered in the wild state were scarcer than usual, and this can be attributed not so much to there being less in the wooded districts, but to the fact that in 1922 there was a great demand for labor thus preventing any large amount of gathering. In addition, men who a few years ago had on their old clothes and dug roots, are now riding around in automobiles, brushing the dust off their best clothes and finding it "beneath their dignity" to dig roots and gather and strip herbs and barks. These conditions caused many of the roots, herbs and barks to be much higher at the close of 1922 than at the beginning of the year and present prices will probably maintain the same general average in 1923.

Farmers of a more intelligent and scientific class are beginning to pay attention to the cultivation of crude drugs, ginseng, golden seal, pinkroot and other roots are being cultivated, and through research and assistance by the United States Agricultural Department and agricultural colleges, in a few years, whatever scarcity there is in various wild roots will likely be made up by cultivation.

Botanical Drugs: Record of Prices

Miscellaneous

Balm of Gilead

On December 20, 1899, the price was 35c.; October 18, 1901, 32c.; 1911, 25@26c.; 1913, 24@26c.; 1919, March, $3.00.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.40	$1.00	$0.50	$0.45
February	.95	.95	.45	.45
March	.95	.90	.45	.45
April	.90	.90	.45	.40
May	.90	.90	.45	.40
June	.90	.75	.45	.45
July	.75	.75	.45	.45
August	.75	.70	.45	.45
September	.70	.70	.43	.43
October	.70	.65	.43	.43
November	.65	.65	.43	.42
December	.60	.60	.45	.42
Year	1.40	.60	.50	.40

Ergot, Spanish

On November 22, 1871, the price was 80c.; October 18, 1881, 60@65c.; 1891, 38@43c.; 1901, 42@45c.; 1911, $1.25@1.30; 1913, $1.25@1.30; 1919, December, $5.

	1921. Spanish. H.	1921. Spanish. L.	1922. Spanish. H.	1922. Spanish. L.
January	$1.10	$0.75	$1.07	$1.03
February	.95	.65	1.03	1.02
March	.80	.65	1.02	.95
April	.90	.90	1.03	1.00
May	1.25	1.00	1.05	1.00
June	1.25	1.10	1.05	1.03
July	1.25	1.10	1.05	1.03
August	1.25	1.25	1.05	1.00
September	1.30	1.25	.80	.70
October	1.20	1.12	.63	.55
November	1.20	1.10	.60	.60
December	1.07	1.07	.62	.60
Year	1.30	.65	1.07	.55

Lycopodium

On February 25, 1874, the price was 70c.; October 18, 1881, 32@34c.; 1891, 33@36c.; 1901, 52@54c.; 1911, 48@50c.; 1913, 42@44c.; 1921, February, $4.75.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.85	$3.75	$1.30	$1.10
February	4.25	3.85	1.10	1.00
March	4.75	4.35	1.10	1.05
April	4.25	3.90	1.05	1.05
May	3.90	3.75	1.05	1.00
June	3.75	3.70	1.00	.85
July	3.65	3.60	.90	.85
August	3.50	3.25	.85	.75
September	3.25	2.35	.75	.75
October	2.75	1.75	.75	.75
November	1.75	1.60	.72	.50
December	1.50	1.35	.50	.48
Year	4.75	1.35	1.30	.48

Manna, Flake

On October 18, 1871, the price on large flake was $1.40; small flake, 83@85c.; 1881, large flake, 95c.@$1; small flake, 38@40c.; 1891, large flake, 75@80c.; small flake, 30@35c.; 1901, large flake, 80c.@$1; small flake, 30@35c.; 1911, large flake, $1; small flake, 75@80c.; 1913, large flake, 85@90c.; small flake, 55@57c.; 1919, large, April, $1.30; small, October, 1916, $1.65.

	1921. Large. H.	1921. Large. L.	1921 Small. H.	1921 Small. L.
January	$0.90	$0.85	$0.52	$0.45
February	.85	.85	.45	.45
March	.85	.85	.45	.45
April	.85	.85	.45	.45
May	.95	.85	.41	.40
June	.85	.85	.41	.41
July	.85	.75	.41	.39
August	.73	.73	.50	.50
September	.73	.73	.50	.50
October	.73	.73	.50	.50
November	.73	.73	.50	.50
December	.85	.85	.50	.50
Year	.95	.73	.52	.39

	1922. Large. H.	1922. Large. L.	1922. Small. H.	1922. Small. L.
January	$0.85	$0.85	$0.50	$0.45
February	.85	.85	.52	.44
March	.85	.85	.52	.52
April	.85	.85	.52	.52
May	.85	.85	.50	.48
June	.90	.85	.55	.48
July	.90	.90	.60	.55
August	.90	.90	.55	.55
September	.90	.85	.58	.48
October	.85	.85	.48	.40
November	.85	.58	.38	.36
December	.58	.58	.36	.35
Year	.90	.58	.60	.35

Nux Vomica, Buttons

On November 22, 1871, the price for powder was 18@21c.; October 18, 1881, 2½c.; 1891, 3¼@4½c.; 1901, 2¾@3c.; 1911, 2½@3c.; 1913, 2¾@3c.; 1920, June, 18c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.13	$0.13	$0.10	$0.10
February	.12	.12	.09	.09
March	.12	.11	.09	.08
April	.13	.12	.08	.07
May	.14	.13½	.08	.07
June	.18	.18	.06	.06
July	.14	.11	.08	.06
August	.17	.16	.08	.06¾
September	.10	.10	.07½	.06½
October	.10	.10	.07½	.07½
November	.10	.10	.07½	.07½
December	.10	.10	.07½	.07½
Year	.18	.10	.10	.06

Tamarinds

On July 20, 1881, the price was $1.75; October 18, 1881, $2; 1901, $2.05@2.25; 1911, 2.50@2.75; 1913, $2.45@2.50; 1919, November, $7.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$5.00	$3.00	$3.00	$2.75
February	5.00	5.00	2.75	2.75
March	5.00	5.00	2.75	2.75
April	5.00	4.50	2.75	2.75
May	4.50	4.50	2.75	2.75
June	4.50	4.50	2.75	2.75
July	4.50	3.00	2.75	2.75
August	3.00	3.00	2.75	2.75
September	3.00	3.00	3.75	3.75
October	3.00	3.00	3.75	3.75
November	3.00	3.00	3.85	3.85
December	3.00	3.00	3.50	2.80
Year	5.00	3.00	3.85	2.75

Balsams

Copaiba, Para

On October 18, 1871, the price was 77½@80c.; 1881, 52½@54c.; 1891, 52½@55c.; 1901, 45@50c.; 1911, 60@85c.; 1913, 48@50c.; 1919, March, 75c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.30	$0.25	$0.26	$0.26
February	.24	.24	.26	.26
March	.28	.24	.25	.25
April	.28	.28	.25	.25
May	.28	.27	.25	.25
June	.27	.27	.25	.25
July	.27	.27	.25	.25
August	.26	.26	.25	.24
September	.26	.26	.24	.24
October	.26	.26	.24	.24
November	.26	.26	.24	.24
December	.26	.26	.24	.24
Year	.30	.24	.26	.24

Copaiba, South American

On October 18, 1871, the price was 77½@80c.; 1881, 52½@54c.; 1891, 60c.; 1901, 35@40c.; 1911, 38@45c.; 1913, 44@48c.; 1918, January, 97½c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.40	$0.38	$0.30	$0.30
February	.35	.35	.30	.30
March	.35	.35	.29	.29
April	.35	.33	.29	.29
May	.33	.33	.29	.29
June	.33	.33	.29	.29
July	.33	.33	.29	.29
August	.32	.32	.29	.29
September	.32	.30	.29	.29
October	.30	.30	.29	.29
November	.30	.30	.29	.29
December	.30	.30	.29	.28
Year	.40	.30	.30	.28

Fir, Canada

On November 22, 1871, the price was $3@3.50; October 18, 1881, $2.25; 1891, $1.70@1.90; 1901, $3.65@3.75; 1911, $4.10@4.25; 1913, $9.50@10; 1920, April, $16.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$14.00	$14.00	$12.00	$10.75
February	14.00	14.00	10.75	10.75
March	14.00	14.00	10.75	10.75
April	14.00	14.00	10.75	10.75
May	14.00	14.00	10.75	10.75
June	14.00	14.00	10.75	10.75
July	14.00	13.00	10.75	10.75
August	13.00	12.00	10.75	10.75
September	12.00	12.00	10.75	10.75
October	12.00	12.00	10.75	10.75
November	12.00	12.00	10.75	10.75
December	12.00	12.00	10.75	10.75
Year	14.00	12.00	12.00	10.75

Fir, Oregon

On March 26, 1873, the price was $3.50; October 18, 1881, nominal; 1891, $1@1.10; 1901, 75@85c.; 1911, 80@90c.; 1913, $1.30@1.50; 1919, December, $1.90.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.70	$1.70	$1.45	$1.30
February	1.70	1.70	1.45	1.30
March	1.60	1.60	1.60	1.25
April	1.60	1.60	1.35	1.20
May	1.75	1.60	1.20	1.20
June	1.55	1.55	1.20	1.20
July	1.55	1.45	1.35	1.20
August	1.45	1.45	1.35	1.30
September	1.45	1.45	1.35	1.35
October	1.45	1.45	1.35	1.35
November	1.45	1.45	1.35	1.35
December	1.45	1.45	1.70	1.70
Year	1.75	1.45	1.70	1.20

Peru

On October 18, 1871, the price was $3.90; 1881, $2.75@3; 1891, $1.20@1.40; 1901, $1.30@1.40; 1911, $1.50@1.90; 1913, $1.50@1.60; 1920, February, $5.75.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.75	$1.50	$1.40	$1.40
February	1.50	1.45	1.65	1.50
March	1.70	1.45	2.25	1.75
April	1.60	1.60	2.35	2.25
May	1.60	1.50	2.25	2.10
June	1.50	1.35	2.00	1.75
July	1.40	1.35	1.75	1.75
August	1.40	1.40	1.75	1.75
September	1.45	1.40	1.75	1.65
October	1.40	1.40	1.70	1.65
November	1.45	1.45	1.80	1.75
December	1.45	1.40	2.00	1.90
Year	1.75	1.35	2.35	1.40

Tolu

On October 18, 1871, the price was 80c.; 1881, 65@70c.; 1891, 27@30c.; 1901, 33@36c.; 1911, 50@60c.; 1913, 80@85c.; 1919, October, $1.75.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.50	$0.50	$0.30	$0.30
February	.50	.45	.47½	.37½
March	.45	.40	.55	.50
April	.40	.35	.55	.50
May	.35	.34	.55	.55
June	.34	.34	.55	.50
July	.30	.30	.75	.50
August	.30	.30	.70	.70
September	.30	.30	.70	.65
October	.30	.30	.70	.65
November	.30	.30	.75	.75
December	.30	.30	.75	.75
Year	.50	.30	.75	.30

Barks

Black Haw Root

On December 20, 1897, the price was 7½@8½c.; October 18, 1901, 10½@12c.; 1911, 19@20c.; 1913, 16@18c.; 1918, December, 65c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.48	$0.48	$0.24	$0.24
February	.48	.48	.24	.24
March	.48	.42	.24	.24
April	.42	.40	.24	.22
May	.40	.38	.22	.22
June	.35	.32	.22	.22
July	.32	.32	.22	.22
August	.28	.28	.25	.22
September	.28	.28	.28	.26
October	.28	.28	.30	.28
November	.28	.26	.40	.30
December	.26	.26	.40	.38
Year	.48	.26	.40	.22

Calisaya

On February 25, 1874, the price was $1.15; October 18, 1881, $1.50@1.75; 1891, 15@65c.; 1901, 22@25c.; 1911, 18@28c.; 1913, 18@28c.; 1918, June, 85c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.40	$0.40	$0.20	$0.20
February	.39	.39	.20	.20
March	.39	.30	.20	.17
April	.30	.30	.17	.17
May	.45	.30	.17	.17
June	.45	.45	.17	.12
July	.45	.25	.12	.12
August	.25	.25	.12	.12
September	.25	.22	.12	.12
October	.22	.20	.12	.12
November	.20	.20	.12	.12
December	.20	.20	.12	.12
Year	.45	.20	.20	.12

Cinchona, Red Quills

On November 22, 1871, the price was 90c.@$1; October 18, 1881, 15c.@$1.75; 1891, 25@35c.; 1901, 20@25c.; 1911, 18@20c.; 1913, 20@28c.; 1918, May, $1.25.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.45	$0.45	$0.40	$0.
February	.45	.45	.30	
March	.45	.38	.30	
April	.35	.35	.30	
May	.35	.30	.30	
June	.30	.30	.30	
July	.30	.30	.30	
August	.30	.25	.40	
September	.35	.35	.40	
October	.35	.35	.40	
November	.35	.35	.40	
December	.37	.37	.40	
Year	.45	.25	.40	

Condurango

On November 22, 1871, the price was $4@; October 18, 1896, 18c.; 1901, 14@16c.; 1; 17@18c.; 1913, 12½@14c.; 1917, September, 1

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.11	$0.11	$0.09½	$0
February	.11	.11	.07	
March	.11	.11	.07	
April	.11	.11	.07	
May	.11	.10	.07	
June	.10	.10	.07	
July	.10	.10	.07	
August	.10	.10	.07	
September	.10	.10	.08	
October	.10	.10	.07	
November	.10	.10	.07	
December	.10	.10	.07	
Year	.11	.10	.09½	

Cascara Sagrada

On March 31, 1880, the price was 40@; October 18, 1891, 5@6c.; 1901, 5@7c.; 1911, 10½c.; 1913, 7½@10c.; 1918, September, 19c.

	1921. H.	1921. L.	1922. H.	1922.
January	$0.16	$0.15	$0.11	$0.
February	.15	.15	.11	
March	.15	.13½	.11	
April	.13½	.13½	.10	
May	.12½	.12	.11	
June	.12	.12	.11	
July	.12	.10	.11	
August	.10	.10	.11	
September	.10	.10	.11	
October	.11	.11	.12	
November	.11	.11	.12	
December	.11	.11	.14	
Year	.16	.10	.14	

Cottonroot

On August 25, 1886, the price was 8@; October 18, 1881, 8@9c.; 1906, 8½@10c.; 22@25c.; 1913, 6@7c.; 1920, August, 80c.

	1921. H.	1921. L.	1922.
January	$0.50	$0.40	$0.14
February	.40	.40	.14
March	.35	.25	.14
April	.35	.20	.14
May	.20	.18	.14
June	.17	.17	.14
July	.17	.16	.13
August	.16	.16	.13
September	.16	.16	.13
October	.16	.16	.13
November	.16	.16	.13
December	.14	.14	.13
Year	.50	.14	.14

Elm, Bundles, Selected

On February 18, 1874, the price was October 8, 1881, 12½@14c.; 1891, 12½@; 1901, 12c.; 1911, 17@20c.; 1913, 17@21c.; October, 90c.

	1921. H.	1921. L.	1922. H.	1922.
January	$0.80	$0.80	$0.30	$
February	.75	.72	.30	
March	.70	.65	.28	
April	.65	.60	.25	
May	.60	.60	.24	
June	.55	.45	.20½	
July	.40	.33	.28	
August	.33	.31	.30	
September	.31	.30	.27	
October	.30	.30	.27	
November	.32	.32	.27	
December	.32	.30	.25	
Year	.80	.30	.30	

Lemon Peel

On October 18, 1911, the price was 5@6c.; 1913, 6¼@7c.; 1918, January, 10c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.10	$0.10	$0.09	$0.09
February	.10	.10	.09	.09
March	.10	.10	.09	.09
April	.10	.10	.09	.09
May	.10	.10	.09	.08½
June	.10	.10	.08½	.08½
July	.10	.10	.08½	.08½
August	.10	.10	.08½	.08½
September	.10	.10	.08½	.08½
October	.09	.09	.08½	.08½
November	.09	.09	.09	.08½
December	.09	.09	.09	.09
Year	.10	.09	.09	.08½

Orange Peel, Bitter Curacao

On November 22, 1871, the price was 8@9c.; October 18, 1881, 13@14c.; 1891, 4½@10c.; 1901, 7@8c.; 1911, 4@5c.; 1913, 4@5c.; 1919, August, 6c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.12	$0.12	$0.06	$0.06
February	.12	.12	.06	.06
March	.12	.11	.06	.06
April	.11	.11	.06	.05½
May	.11	.11	.05½	.05½
June	.11	.08	.05	.05
July	.08	.08	.05	.05
August	.07	.07	.05	.05
September	.07	.06	.05	.05
October	.06	.06	.05	.05
November	.06	.06	.06	.05
December	.06	.06	.06	.06
Year	.12	.06	.06	.05

Prickly Ash

On April 3, 1878, the price of crushed was 8c.; October 18, 1881, 10@16c.; 1891, 9@10c.; 1901, 8@10c.; 1911, 28@35c.; 1916, 14@16c.; 1920, December, 28c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.28	$0.24	$0.15	$0.15
February	.28	.28	.15	.15
March	.28	.26	.15	.15
April	.26	.25	.15	.15
May	.22	.22	.15	.15
June	.22	.22	.14	.14
July	.16	.16	.14	.13
August	.16	.16	.13	.13
September	.16	.16	.13	.13
October	.16	.16	.13	.13
November	.16	.16	.13	.13
December	.16	.15	.13	.13
Year	.28	.15	.15	.13

Sassafras, Ordinary

On November 22, 1871, the price was 5@5½c.; October 18, 1881, 6@6½c.; 1891, 8@10c.; 1901, 9@10c.; 1911, 12@14c.; 1913, 11@13c.; 1919, December, 40c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.23	$0.23	$0.12	$0.11
February	.23	.23	.12	.12
March	.23	.23	.12	.11
April	.23	.23	.11	.11
May	.23	.23	.11	.11
June	.23	.22	.11	.11
July	.22	.22	.11	.11
August	.22	.15	.11	.11
September	.15	.15	.11	.11
October	.15	.15	.11	.10
November	.15	.15	.12	.10
December	.15	.15	.12	.11
Year	.23	.15	.12	.10

Soap, Whole

On April 2, 1878, the price was 8c.; October 18, 1881, 4½@6½c.; 1891, 8½@9c.; 1901, 3½@4c.; 1911, 6@6½c.; 1913, 8½@9½c.; 1919, August, 16c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.12	$0.11½	$0.06	$0.05½
February	.10½	.10½	.05½	.05
March	.10½	.10½	.05½	.05
April	.10½	.10½	.05½	.05½
May	.10½	.10½	.05½	.05½
June	.07	.07	.06	.06
July	.07	.07	.06½	.06
August	.07	.07	.06½	.06½
September	.07	.07	.06½	.06½
October	.07	.07	.06½	.06½
November	.07	.07	.06½	.06½
December	.07	.06	.06½	.06½
Year	.12	.06	.06½	.05

Soap, Cut

On April 2, 1878, the price was 3c.; October 18, 1886, 6@7c.; 1911, 8@8½c.; 1913, 10c.; 1920, December, 26c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.18	$0.18	$0.09	$0.09
February	.16	.16	.09	.08½
March	.15	.14	.08½	.08½
April	.14	.13	.08½	.08½
May	.12	.12	.08½	.08½
June	.12	.12	.08½	.08½
July	.12	.11	.08½	.08½
August	.11	.11	.08½	.08½
September	.10½	.10½	.08½	.08½
October	.10½	.10½	.08½	.08½
November	.11	.10	.08½	.08
December	.10	.09	.08	.07½
Year	.18	.09	.09	.07½

Soap, Crushed

On April 2, 1878, the price was 16c.; October 18, 1881, 8@8½c.; 1891, 9@10c.; 1901, 5@6c.; 1907@7½c.; 1913, 10c.; 1919, August, 23c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.16	$0.16	$0.09	$0.09
February	.14½	.14½	.09	.09
March	.14½	.14½	.08½	.08½
April	.14½	.13½	.08½	.08½
May	.13½	.12½	.08½	.08½
June	.12	.12	.08½	.08½
July	.12	.12	.08½	.08½
August	.12	.10	.08½	.08½
September	.09½	.09½	.08½	.08½
October	.09½	.09½	.08½	.08½
November	.10	.09	.08½	.07½
December	.09	.09	.08	.07½
Year	.16	.09	.09	.07½

Wahoo Root

On December 20, 1897, the price was 19@20c.; October 18, 1901, 16@20c.; 1911, 40@42c.; 1913, 30@40c.; 1920, December, 90c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.90	$0.90	$0.55	$0.55
February	.90	.90	.55	.55
March	.90	.80	.55	.55
April	.80	.75	.55	.52
May	.75	.75	.52	.52
June	.60	.59	.52	.52
July	.55	.55	.52	.52
August	.55	.55	.52	.52
September	.55	.55	Nominal	
October	.55	.55	Nominal	
November	.58	.55	1.25	1.25
December	.60	.57	1.40	1.25
Year	.90	.55	1.40	.52

Wahoo Tree

On December 20, 1897, the price was 14@15c.; October 18, 1901, 14@15c.; 1911, 15@18c.; 1913, 13@18c.; 1920, April, 40c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.35	$0.35	$0.28	$0.28
February	.35	.35	.28	.28
March	.35	.35	.28	.28
April	.35	.35	.28	.28
May	.35	.30	.28	.28
June	.30	.28	.28	.28
July	.28	.28	.28	.28
August	.28	.28	.28	.28
September	.28	.28	.28	.28
October	.28	.28	.28	.28
November	.28	.28	.45	.28
December	.28	.28	.45	.30
Year	.35	.28	.45	.28

Wild Cherry, Thick, Unrossed

On April 28, 1875, the price was 6c.; October 18, 1881, 5½c.; 1901, 5½c.; 1911, 6c.; 1913, 6c.; 1919, February, 27c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.07	$0.07	$0.06	$0.06
February	.07	.07	.06	.06
March	.07	.07	.06	.06
April	.07	.07	.06	.06
May	.07	.07	.06	.06
June	.07	.06	.05	.05
July	.06	.06	.04¼	.04¼
August	.06	.06	.04¼	.04¼
September	.06	.06	.04¼	.04¼
October	.06	.06	.04¼	.04¼
November	.06	.06	.04¼	.04¼
December	.06	.06	.05½	.04¼
Year	.07	.06	.06	.04¼

Wild Cherry, Thin, Unrossed

On April 28, 1875, the price was 7c.; October 18, 1881, 9c.; 1901, 7½c.; 1911, 9c.; 1913, 9c.; 1919, January, 35c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.10½	$0.10½	$0.09	$0.09
February	.10½	.10½	.09	.09
March	.10½	.10½	.09	.09
April	.10½	.10½	.09	.09
May	.10½	.10	.09	.09
June	.11	.10	.07¾	.07¼
July	.11	.11	.07¼	.07¼
August	.11	.11	.07½	.07¼
September	.10	.10	.07½	.07
October	.10	.10	.07	.07
November	.09	.09	.08	.07
December	.09	.09	.08½	.08
Year	.11	.09	.09	.07

Beans

Calabar

On February 16, 1881, the price was 40c.; October 18, 1881, 40c.; 1891, 16@18c.; 1901, 8@12c.; 1911, 37@60c.; 1913, 25@30c.; 1918, October, 75c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.20	$0.20	$0.18	$0.18
February	.20	.20	.18	.18
March	.20	.20	.18	.18
April	.20	.20	.18	.18
May	.20	.20	.18	.18
June	.20	.20	.17	.17
July	.20	.20	.17	.17
August	.20	.20	.17	.17
September	.20	.20	.17	.17
October	.20	.20	.17	.17
November	.20	.20	.17	.14
December	.18	.18	.17	.14
Year	.20	.18	.18	.14

Tonka, Angostura

On November 22, 1871, the price was 55@60c.; October 18, 1881, $2.50@3.25; 1891, $1.80@2.20; 1901, 80@85c.; 1911, $5.25@5.50; 1913, $1.75@2; 1919, July, $1.75.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.50	$1.50	$1.35	$1.35
February	1.50	1.40	1.20	1.20
March	1.40	1.30	1.20	1.20
April	1.30	1.30	1.20	1.20
May	1.30	1.30	1.20	1.20
June	1.30	1.30	1.20	1.20
July	1.30	1.30	1.75	1.20
August	1.30	1.25	1.75	1.75
September	1.35	1.25	2.00	2.00
October	1.35	1.35	2.00	2.00
November	1.35	1.35	2.00	2.00
December	1.35	1.35	2.15	2.15
Year	1.50	1.25	2.15	1.20

Vanilla, Mexican, Whole

On November 22, 1871, the price was $14@16; October 18, 1881, $5@15; 1891, $4@8; 1901, $8@13.50; 1911, $4@5; 1913, $3.75@5; 1917, April, $5.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$3.75	$3.50	$7.50	$7.50
February	3.50	3.50	8.00	7.50
March	3.50	3.50	8.50	8.00
April	3.50	3.50	9.00	8.50
May	3.50	3.50	10.00	9.00
June	3.50	3.50	10.00	10.00
July	3.75	3.50	10.50	10.00
August	4.75	3.75	12.00	10.50
September	5.00	4.50	12.00	11.00
October	5.50	5.00	11.00	11.00
November	6.00	6.00	11.00	11.00
December	7.00	6.00	11.00	11.00
Year	7.00	3.50	12.00	7.50

Twenty-three Years' Prices

	H.	L.
1922	$12.00	$7.50
1921	7.00	3.50
1920	4.50	3.75
1919	4.50	4.25
1918	4.75	4.25
1917	5.00	4.50
1916	5.00	3.75
1915	3.75	2.50
1914	5.00	3.50
1913	4.00	3.62½
1912	5.00	3.50
1911	4.00	2.75
1910	3.37½	2.75
1909	3.25	2.75
1908	4.25	3.00
1907	4.25	2.75
1906	2.75	2.75
1905	3.50	2.75
1904	5.00	3.75
1903	6.50	5.00
1902	6.75	4.75
1901	9.00	6.75
1900	11.00	9.00

Vanilla, Bourbon, Whole

On April 14, 1880, the price was $5@8; October 18, 1881, $6@10; 1891, $3@6; 1901, $4.75@8.50; 1911, $3.85@4.50; 1913, $3@3.75; 1919, August, $3.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$2.25	$1.75	$3.00	$3.00
February	1.75	1.75	3.00	3.00
March	1.75	1.75	3.00	3.00
April	1.75	1.50	3.00	3.00
May	1.50	1.50	3.00	3.00
June	1.50	1.50	3.00	3.00
July	2.00	1.75	3.00	2.75
August	2.00	1.75	2.75	2.75
September	2.00	2.00	2.75	2.65
October	2.25	2.00	2.75	2.75
November	2.25	2.25	2.75	2.75
December	2.75	2.25	2.75	2.75
Year	2.75	1.50	3.00	2.75

Twenty-three Years' Prices

	H.	L.
1922	$3.00	$2.75
1921	2.75	1.50
1920	3.00	1.75
1919	2.85	2.25
1918	2.75	2.00
1917	2.50	2.00
1916	2.75	2.50
1915	3.50	2.25
1914	4.50	2.75
1913	3.10	2.75
1912	4.50	3.00
1911	3.75	2.75
1910	3.00	2.75
1909	3.00	1.75
1908	3.00	1.50
1907	3.00	1.25
1906	1.50	1.00
1905	1.50	1.00
1904	1.50	1.50
1903	2.50	1.50
1902	3.00	2.50
1901	4.75	3.00
1900	4.50	4.00

Berries

Cubeb, Ordinary

On October 18, 1871, the price was 18c.; 1881, 65c.; 1891, 55c.; 1901, 12@13c.; 1911, 42@44c.; 1913, 38@40c.; 1919, November, $1.40.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.30	$1.30	$0.90	$0.90
February	1.30	1.25	.90	.90
March	1.30	1.25	.90	.90
April	1.20	1.10	.90	.90
May	1.10	1.00	.95	.90
June	1.00	1.00	.95	.95
July	1.00	1.00	.95	.95
August	1.00	.90	.90	.90
September	.90	.90	.85	.85
October	.90	.90	.85	.82½
November	.90	.90	.82½	.80
December	.90	.90	.82½	.80
Year	1.30	.90	.95	.80

Cubeb XX

On January 12, 1881, the price was 25c.; October 18, 1881, $1; 1891, 85c.; 1901, 14@17c.; 1911, 44@46c.; 1913, 40@42c.; 1920, January, $1.50.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.40	$1.40	$1.00	$1.00
February	1.40	1.40	1.00	1.00
March	1.40	1.35	1.00	1.00
April	1.30	1.20	1.00	1.00
May	1.20	1.20	1.05	1.00
June	1.15	1.10	1.05	1.05
July	1.10	1.10	1.05	1.05
August	1.10	1.00	.95	.95
September	1.00	1.00	.90	.90
October	1.00	1.00	.90	.85
November	1.00	1.00	.85	.85
December	1.00	1.00	.85	.85
Year	1.40	1.00	1.05	.85

Cubeb, Powdered

On October 18, 1871, the price was 35c.; 1881, $1.35; 1891, 80c.; 1901, 14@17c.; 1911, 44@46c.; 1913, 40@42c.; 1919, November, $1.45.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.40	$1.35	$0.95	$0.95
February	1.35	1.35	.95	.95
March	1.35	1.30	.95	.95
April	1.25	1.15	.95	.95
May	1.15	1.05	1.00	.95
June	1.05	1.05	1.00	1.00
July	1.10	1.05	1.00	1.00
August	1.00	.95	.95	.95
September	.95	.95	.90	.90
October	.95	.95	.90	.85
November	.95	.95	.85	.85
December	.95	.95	.85	.85
Year	1.40	.95	1.00	.85

Juniper

On January 17, 1872, the price was 4½@5c.; October 18, 1881, 3½@4c.; 1891, 2½@3c.; 1901, 2¾@3c.; 1911, 3¼@3¾c.; 1913, 4@4½c.; 1919, 12c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.03½	$0.03¾	$0.04	$0.04
February	.03¾	.03¾	.04	.03¾
March	.03¾	.03¾	.03¾	.03½
April	.03¾	.03¾	.03¾	.03½
May	.03¾	.03¾	.03½	.03½
June	.03¾	.03¾	.03½	.03½
July	.03¾	.03¾	.03½	.03½
August	.03¾	.03¾	.03½	.03½
September	.04	.03¾	.03	.02¾
October	.04	.04	.02½	.02½
November	.04	.04	.02½	.02½
December	.04	.04	.03¼	.03
Year	.04	.03¾	.04	.02½

Prickly Ash

On January 19, 1881, the price was 90c.@$1; October 18, 1881, 90c.@$1; 1891, $1; 1901, 45@60c.; 1911, 75@81c.; 1913, 24@30c.; 1919, September, 14c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.12	$0.12	$0.11	$0.11
February	.12	.12	.11	.11
March	.12	.12	.11	.11
April	.12	.12	.11	.11
May	.12	.12	.11	.11
June	.12	.12	.11	.11
July	.12	.12	.11	.11
August	.12	.12	.11	.11
September	.12	.12	.11	.11
October	.12	.12	.11	.11
November	.12	.12	.11	.11
December	.12	.12	.11	.11
Year	.12	.12	.11	.11

Flowers

Arnica

On November 22, 1871, the price was 10@11c.; October 18, 1881, 9@10c.; 1891, 16@18c.; 1901, 8½@9½c.; 1911, 13@14c.; 1913, 15@16c.; 1917, April, $3.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.17	$0.15	$0.11	$0.11
February	.15	.15	.11	.11
March	.15	.15	.10	.10
April	.15	.15	.10	.10
May	.15	.14	.09½	.09½
June	.14	.12	.09	.09
July	.12	.12	.08½	.08½
August	.12	.12	.08½	.08½
September	.12	.12	.08½	.08
October	.12	.12	.09	.08
November	.12	.11	.14	.09
December	.11	.11	.14	.14
Year	.17	.14	.14	.08

Chamomile, Roman

On October 18, 1871, the price was 20@30c.; 1881, 14@16c.; 1891, 20@65c.; 1901, 18@20c.; 1911, 27@35c.; 1913, 21@24c.; 1917, May, $1.35.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.16	$0.16	$0.90	$0.85
February	.16	.16	.90	.80
March	.20	.16	.80	.80
April	.23	.20	.80	.80
May	.28	.28	.80	.75
June	.28	.25	.75	.70
July	.25	.23	.70	.70
August	.22	.22	.70	.65
September	.22	.21	.65	.65
October	.22	.22	.75	.65
November	.30	.30	1.00	.75
December	.90	.50	1.25	1.00
Year	.90	.16	1.25	.65

Insect Powder

On May 29, 1872, the price was 55@80c.; October 18, 1881, 40@42c.; 1891, 17@24c.; 1901, 15@24c.; 1911, 14@30c.; 1913, 22@40c.; 1920, March, $1.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.55	$0.50	$0.38	$0.36
February	.50	.50	.60	.38
March	.45	.42	.60	.35
April	.40	.36	.53	.33
May	.36	.36	.53	.53
June	.36	.36	.52	.52
July	.36	.36	.52	.52
August	.36	.36	.52	.52
September	.36	.36	.52	.51
October	.36	.36	.51	.51
November	.36	.36	.65	.51
December	.36	.36	.70	.65
Year	.55	.36	.70	.36

Lavender, Ordinary

On June 12, 1872, the price was 5¾@6c.; October 18, 1881, 4@5½c.; 1891, 3@5c.; 1901, 4@5c.; 1911, 7@9c.; 1913, 10@11c.; 1919, January, 27c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.18	$0.18	$0.25	$0.20
February	.18	.18	.25	.20
March	.18	.18	.25	.20
April	.18	.18	.25	.25
May	.18	.18	.25	.25
June	.18	.18	.45	.27
July	.18	.18	.50	.45
August	.18	.18	.50	.50
September	.18	.18	.50	.35
October	.18	.18	.35	.35
November	.27	.27	.30	.30
December	.27	.20	.30	.25
Year	.27	.18	.50	.20

Saffron, American

On November 22, 1871, the price was $1.75@2; October 18, 1881, 40c.; 1891, 24c.; 1901, 14@20c.; 1911, 30@32c.; 1913, 60@65c.; 1917, January, 75c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.75	$0.68	$1.15	$1.15
February	.70	.70	1.15	1.15
March	.75	.75	1.10	1.10
April	.80	.80	1.10	1.10
May	.80	.75	1.10	1.05
June	.75	.75	1.20	1.05
July	.75	.75	1.40	1.20
August	1.00	.75	1.50	1.40
September	1.35	1.25	1.50	1.40
October	1.35	1.35	1.40	1.40
November	1.35	1.35	1.40	1.40
December	1.35	1.15	1.40	1.40
Year	1.35	.68	1.50	1.05

Thirteen Years' Prices

	H.	L.
1922	$1.50	$1.05
1921	1.35	.68
1920	1.00	.33
1919	.40	.33
1918	.48	.39
1917	.75	.45
1916	2.00	.75
1915	1.25	.32
1914	.60	.35
1913	.45	.30
1912	.45	.33
1911	.33	.18
1910	.35	.18

Saffron, Spanish

On November 22, 1871, the price was $13@14; October 18, 1881, $17@18; 1891, $9.50@11.50; 1901, $6.75@7; 1911, $10.60@11; 1913, $12.25@12.75; 1918, July, $16.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$12.00	$12.00	$16.75	$15.75
February	12.00	12.00	19.00	17.00
March	12.50	12.25	24.00	19.00
April	13.00	13.00	27.00	26.00
May	13.25	13.00	27.00	27.00
June	13.50	13.50	27.00	27.00
July	13.50	13.25	27.00	27.00
August	13.50	13.00	27.00	27.00
September	13.00	13.00	29.00	27.00
October	13.75	13.50	32.00	31.00
November	14.00	13.75	33.00	32.00
December	13.50	14.00	34.00	34.00
Year	13.50	12.00	34.00	15.75

Herbs and Leaves

Aconite

On April 2, 1878, the price of powder was 20@21c.; October 18, 1881, 8@10c.; 1891, 10@11c.; 1901, 9@10c.; 1911, 7@8c.; 1913, 7@8c.; 1920, August, 70c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.55	$0.55	$0.27	$0.27
February	.55	.55	.27	.27
March	.55	.55	.27	.27
April	.55	.55	.27	.27
May	.55	.45	.27	.27
June	.28	.28	.18	.18
July	.28	.27	.18	.18
August	.27	.27	.18	.18
September	.27	.27	.18	.18
October	.27	.27	.18	.18
November	.27	.27	.18	.18
December	.27	.27	.20	.20
Year	.55	.27	.27	.18

Belladonna

On April 2, 1878, the price of powder was 26@27c.; October 18, 1881, whole, 14@16c.; 1891, 11@15c.; 1901, 14@16c.; 1911, 14@17c.; 1913, 16c.; 1918, February, $1.05.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.28	$0.28	$0.14	$0.11
February	.25	.25	.11	.11
March	.25	.25	.11	.11
April	.25	.25	.11	.11
May	.25	.20	.11	.11
June	.20	.17	.11	.11
July	.17	.17	.11	.11
August	.17	.17	.11	.11
September	.17	.16	.11	.11
October	.16	.16	.11	.11
November	.16	.16	.15	.12
December	.15	.14	.16	.13½
Year	.28	.14	.16	.11

Buchu

On November 22, 1871, the price of short was 15@16c.; long, 24@26c.; October 18, 1881, short, 18@20c.; long, 47@50c.; 1891, short, 11@20c.; long, 65c.; 1901, short, 26@28c.; long, 75c.; 1911, short, $1.10@1.15; long, 65@70c.; 1913, short, $1.30@1.35; long, $1.30@1.35; 1920, short, June, $4; long, October, $3.30.

	Per pound							
	1921				1922			
	Short		Long.		Short.		Long.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan.	$2.60	$2.35	$2.75	$2.65	$1.12	$1.05	$1.00	$1.00
Feb.	2.25	1.50	2.65	2.65	1.05	1.00	1.00	0.95
Mch.	1.50	1.30	Nominal		.95	.95	.95	.95
Apr.	1.30	1.15	Nominal		.95	.95	.95	.95
May	1.15	1.05	Nominal		.85	.85	.85	.85
June	1.05	.90	Nominal		1.05	.87	Nominal	
July	.90	.85	Nominal		1.10	1.05	Nominal	
Aug.	.85	.85	Nominal		1.10	1.00	Nominal	
Sept.	1.00	.85	Nominal		.95	.92	Nominal	
Oct.	1.25	1.00	Nominal		.92	.90	Nominal	
Nov.	1.25	1.25	Nominal		1.00	1.00	Nominal	
Dec.	1.20	1.15	Nominal		1.10	1.05	Nominal	
Year	2.60	.85	2.75	2.65	1.12	.85	1.00	.85

Eleven Years' Prices

	Per pound	
	H.	L.
1922	$1.12	$0.85
1921	2.60	1.15
1920	4.00	2.35
1919	3.25	1.75
1918	2.60	1.15
1917	1.35	1.15
1916	1.30	1.15
1915	1.55	1.05
1914	1.85	1.30
1913	1.50	1.25
1912	1.65	.95

Cannabis, Domestic, U. S. P.

On May 8, 1899, the price was 14@15½c.; October 18, 1901, 50@55c.; 1911, $1.25@1.30; 1913, $1.45; 1918, January, $1.50.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.35	$0.35	$0.30	$0.30
February	.35	.35	.30	.30
March	.35	.35	.30	.30
April	.35	.35	.30	.30
May	.35	.35	.45	.30
June	.35	.35	.45	.30
July	.35	.35	.30	.30
August	.30	.30	.30	.30
September	.30	.30	.30	.30
October	.30	.30	1.25	.30
November	.30	.30	2.00	1.25
December	.30	.30	2.00	2.00
Year	.35	.30	2.00	.30

Deer Tongue

On April 2, 1878, the price was 8c.; October 18, 1881, 7@8c.; 1901, 3@4c.; 1911, 8@9c.; 1913, 7½@8c.; 1918, February, 25c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.09	$0.09	$07½	$0.07½
February	.09	.09	.07½	.07½
March	.09	.09	.07½	.07½
April	.09	.09	.07½	.07½
May	.09	.09	.07½	.07½
June	.09	.09	.07½	.07½
July	.09	.09	.07½	.07½
August	.09	.09	.07½	.07½
September	.09	.09	.07½	.07½
October	.09	.09	.07½	.07½
November	.08	.08	.07½	.07½
December	.08	.07½	.08	.07½
Year	.09	.07½	.08	.07½

Henbane

On April 2, 1878, the price of powder was 22c.; October 18, 1881, whole, 12@14c.; 1891, 10c.; 1901, 9@12c.; 1911, 9@10c.; 1913, 6½@7c.; 1918, $2.10.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.30	$0.25	$0.22	$0.22
February	.25	.25	.22	.22
March	.25	.25	.22	.22
April	.25	.25	.45	.22
May	.25	.25	.65	.45
June	.25	.25	.65	.65
July	.22	.21	.65	.65
August	.21	.21	.65	.55
September	.21	.18	.55	.48
October	.20	.18	.48	.42
November	.24	.20	.45	.42
December	.22	.22	.45	.42
Year	.30	.18	.65	.22

Laurel, Good

On April 2, 1878, the price of ground was 10c.; October 18, 1881, whole, 3@5c.; 1891, 3½@4c.; 1901, 3@4c.; 1911, 3¼@3½c.; 1913, 3½@3¾c.; 1918, April, 16c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.04½	$0.04½	$0.03½	$0.03¼
February	.04½	.04½	.03½	.03½
March	.04	.04	.03½	.03½
April	.04	.04	.03½	.03½
May	.04	.03½	.06	.04
June	.03¾	.03½	.06½	.05½
July	.03¾	.03¾	.06	.05
August	.03¾	.03½	.04¾	.04¾
September	.03½	.03½	.04¾	.04¾
October	.03½	.03½	.04¾	.04¾
November	.03½	.03½	.04¾	.04¾
December	.03½	.03½	.04¾	.04¾
Year	.04½	.03½	.06½	.03¼

Pennyroyal

On December 20, 1897, the price was 8½c.; October 18, 1901, 6½c.; 1911, 4@5c.; 1913, 4@5c.; 1918, January, 18c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.10	$0.10	$0.08	$0.08
February	.10	.10	.08	.08
March	.10	.10	.08	.08
April	.10	.10	.08	.08
May	.10	.10	.08	.08
June	.10	.08	.08	.08
July	.08	.08	.08	.08
August	.08	.08	.08	.08
September	.08	.08	.08	.08
October	.08	.08	.08	.08
November	.08	.08	.08	.08
December	.08	.08	.08	.07
Year	.10	.08	.08	.07

Peppermint

On April 2, 1878, the price was 10c.; October 18, 1881, 10c.; 1901, 10c.; 1911, 8@8½c.; 1913, 11@12c.; 1918, June, 30c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.30	$0.30	$0.16	$0.16
February	.30	.30	.16	.16
March	.30	.30	.16	.16
April	.30	.28	.23	.16
May	.28	.28	.23	.23
June	.28	.28	.23	.17
July	.28	.26	.17	.17
August	.26	.20	.17	.17
September	.20	.16	.17	.17
October	.16	.16	.17	.17
November	.16	.16	.17	.15
December	.16	.16	.15	.15
Year	.30	.16	.23	.15

Princess Pine

On October 18, 1871, the price was 3¼@4c.; 1881, 8@9c.; 1891, 8c.; 1901, 8c.; 1911, 8@10c.; 1913, 8@10c.; 1918, October, 50c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.18	$0.18	$0.14	$0.14
February	.18	.17	.14	.14
March	.17	.17	.14	.14
April	.17	.16	.14	.14
May	.16	.16	.14	.14
June	.16	.16	.14	.14
July	.16	.16	.14	.14
August	.16	.16	.14	.14
September	.16	.16	.14	.14
October	.16	.16	.14	.14
November	.16	.14	.15	.14
December	.16	.14	.15	.15
Year	.18	.14	.15	.14

Sage, Greek

On March 26, 1873, the price was 3½@4c.; October 18, 1881, Italian, 2¼@2½c.; 1891, Italian, 5½@8c.; 1901, Italian, 3¾@3¾c.; 1911, Italian, 3¼@4c.; 1913, Greek, 3@4c.; 1918, November, 30c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.08½	$0.08	$0.04	$0.03½
February	.07	.07	.04	.04
March	.06½	.05¾	.04	.03
April	.05¾	.05¼	.03½	.03½
May	.05½	.05¼	.03½	.03½
June	.05½	.05	.03	.02¾
July	.04¾	.04½	.03	.02¾
August	.04½	.04½	.03½	.03
September	.04½	.04	.03½	.03½
October	.04¼	.04	.04¾	.03½
November	.04¼	.04	.03½	.03½
December	.04	.03¾	.04	.03½
Year	.08½	.03¾	.04¾	.02¾

Senna, Tinnevelly

On October 18, 1871, the price was 16c.; 1881, 11@15c.; 1891, 5@18c.; 1901, 6¼@14c.; 1911, 6@12c.; 1913, 7@9c.; 1919, November, 17c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.11	$0.11	$0.06	$0.04
February	.11	.08	.04	.04
March	.08	.08	.04	.04
April	.08	.08	.04	.04
May	.08	.08	.04	.04
June	.08	.08	.04	.04
July	.08	.08	.04	.04
August	.08	.06	.04	.04
September	.06	.06	.04	.04
October	.06	.06	.05½	.04
November	.06	.06	.05½	.05½
December	.06	.06	.06	.05½
Year	.11	.06	.06	.04

Uva Ursi

On May 29, 1872, the price was 6@7c.; October 18, 1881, 4@5½c.; 1891, 5@7c.; 1901, 3½@5c.; 1911, 3¾@4c.; 1913, 3½@4c.; 1918, May, 24c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.05½	$0.05½	$0.06	$0.04
February	.05½	.05	.09	.08
March	.05	.05	.13	.09
April	.05	.05	.13	.07
May	.05	.05	.06½	.06
June	.05	.05	.06	.05½
July	.04½	.05	.05½	.05½
August	.04	.04	.05½	.05½
September	.04	.04	.05½	.05½
October	.04	.04	.05½	.05½
November	.04	.04	.05½	.05½
December	.04	.04	.05½	.05½
Year	.05½	.04	.13	.04

Roots

Aconite, U. S. P.

On February 23, 1874, the price was 14c.; October 18, 1881, 10@12c.; 1891, 13@15c.; 1901, 13@14c.; 1911, 10½@11c.; 1913, 13@15c.; 1919, December, 90c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.35	$0.35	$0.20	$0.20
February	.35	.33	.20	.20
March	.33	.33	.20	.20
April	.33	.30	.23	.20
May	.30	.25	.22	.22
June	.25	.25	.21	.21
July	.25	.25	.25	.21
August	.25	.22	.25	.23
September	.22	.22	.23	.23
October	.20	.20	.24	.23
November	.20	.20	.24	.24
December	.20	.20	.35	.25
Year	.35	.20	.35	.20

Aletris

On January 12, 1881, the price was 35@40c.; October 18, 1881, 35@40c.; 1901, 16c.; 1911, 20@22c.; 1913, 20@21c.; 1920, March, $1.25.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.80	$0.80	$0.34	$0.34
February	.80	.80	.34	.32
March	.80	.70	.32	.30
April	.70	.60	.30	.30
May	.60	.45	.30	.30
June	.43	.43	.30	.30
July	.43	.42	.30	.30
August	.42	.40	.55	.35
September	.40	.40	.55	.53
October	.40	.36	.55	.53
November	.36	.34	.60	.55
December	.34	.34	.60	.58
Year	.80	.34	.60	.30

Belladonna

On December 22, 1875, the price was 18c.; October 18, 1881, 10@12c.; 1891, 6@12c.; 1901, 10@11c.; 1911, 10½@11c.; 1913, 9@10c.; 1917, December, $4.50.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.40	$0.40	$0.14	$0.14
February	.35	.35	.12	.12
March	.35	.35	.12	.12
April	.35	.35	.12	.12
May	.30	.30	.12	.11
June	.30	.18½	.11	.11
July	.18½	.18	.13	.11
August	.18	.18	.13	.12
September	.18	.18	.12	.12
October	.18	.14	.12	.12
November	.14	.14	.12	.10
December	.14	.14	.10	.10
Year	.40	.14	.14	.10

Blood

On April 28, 1875, the price of crushed was 10c.; October 18, 1881, 6@6½c.; 1891, 4½@6c.; 1901, 5@6c.; 1911, 8@8½c.; 1913, 8½@9c.; 1918, November, 80c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.22	$0.22	$0.14	$0.14
February	.21	.21	.14	.14
March	.21	.19	.14	.14
April	.19	.19	.14	.14
May	.19	.19	.14	.14
June	.19	.18	.14	.14
July	.18	.17½	.14	.14
August	.17	.14	.14	.14
September	.14	.14	.14	.13
October	.14	.14	.13	.13
November	.14	.14	.13	.13
December	.14	.14	.13	.13
Year	.22	.14	.14	.13

Colombo, Whole

On November 22, 1871, the price was 13@14c.; October 18, 1881, 9½@10c.; 1891, 5@10c.; 1901, 8@12c.; 1911, 8@10c.; 1913, 6@7c.; 1918, September, 30c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.07	$0.07	$0.03	$0.03
February	.07	.07	.03	.03
March	.07	.07	.03	.03
April	.06½	.06½	.03	.03
May	.06½	.02	.03	.03
June	.02	.02	.03	.03
July	.02	.02	.03	.03
August	.02	.02	.03	.03
September	.04	.04	.03	.03
October	.04	.04	.03	.03
November	.04	.03	.03	.03
December	.03	.03	.03	.01
Year	.07	.02	.03	.01

Gentian, Whole

On November 22, 1871, the price was 5½@6c.; October 18, 1881, 4½@4¾c.; 1891, 3¾@4½c.; 1901, 4@4¼c.; 1911, 6@6½c.; 1913, 6½@6¾c.; 1918, November, 18c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.09	$0.09	$0.08	$0.08
February	.10	.09	.08	.08
March	.09	.09	.08	.08
April	.09	.09	.08	.08
May	.09	.08	.08	.08
June	.08	.08	.08½	.08
July	.08	.08	.08½	.08½
August	.08	.08	.08½	.08½
September	.08	.08	.08½	.08½
October	.08	.08	.08½	.08½
November	.08	.08	.08½	.08
December	.07½	.07½	.08½	.08
Year	.10	.07½	.08½	.08

Golden Seal

On February 25, 1874, the price was 14c.; October 18, 1881, 15@16c.; 1891, 24@26c.; 1901, 55@60c.; 1911, $5.25@5.50; 1913, $4.90@5; 1917, April, $5.75.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$4.85	$4.75	$3.25	$3.00
February	5.00	4.75	3.00	3.00
March	4.75	4.50	3.00	3.00
April	4.50	4.25	3.25	3.20
May	4.75	4.45	3.25	3.20
June	4.45	3.75	3.50	3.40
July	3.85	3.75	3.60	3.50
August	3.75	3.75	3.60	3.50
September	3.75	3.50	3.55	3.50
October	3.50	3.25	3.50	3.45
November	3.25	3.10	3.35	3.25
December	3.25	3.25	3.25	3.20
Year	5.00	3.10	3.60	3.00

Eleven Years' Prices

	Per pound	
	H.	L.
1922	$3.60	$3.00
1921	5.00	3.10
1920	6.50	4.85
1919	6.00	5.25
1918	5.35	4.90
1917	5.75	5.00
1916	5.50	4.25
1915	4.85	4.20
1914	4.90	4.20
1913	5.00	3.90
1912	5.25	4.00

Hellebore, White, Powdered

On May 28, 1875, the price was 15c.; October 18, 1881, whole, 6@7c.; 1891, 8@12c.; 1901, 7@7½c.; 1911, 7½@8c.; 1913, 10@11c.; 1918, February, 24c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.21	$0.19	$0.15	$0.1
February	.19	.19	.15	.1
March	.18	.18	.14	.1
April	.18	.18	.14	.1
May	.18	.17	.14	.1
June	.16	.16	.16	.1
July	.16	.16	.16	.1
August	.16	.16	.15½	.1
September	.16	.16	.15	.1
October	.16	.15	.14	.1
November	.15	.15	.16	.1
December	.15	.15	.16	.1
Year	.21	.15	.16	.1

Ipecac

On October 18, 1871, the price of Rio was $1.27½; 1881, $1.10@1.15; 1891, $2@2.15; 1901, $2.70@2.80; 1911, $2.25@2.30; 1913, $2.10; 1918, November, $4.75.

	Per pound							
	1921				1922			
	Cartagena.		Rio.		Cartagena.		Rio.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan.	$3.00	$2.75	$2.50	$2.50	$1.35	$1.25	$1.35	$1.3
Feb.	2.75	2.75	2.50	2.50	1.50	1.25	Nomina	
Mar.	2.75	2.40	2.50	2.50	1.75	1.50	1.90	1.9
Apr.	2.25	2.15	2.50	2.15	1.75	1.75	1.90	1.9
May	2.15	2.15	2.15	2.15	1.75	1.65	1.90	1.9
June	2.15	2.15	2.15	2.15	1.60	1.55	1.55	1.5
July	2.00	1.85	2.15	2.15	1.55	1.55	1.55	1.5
Aug.	1.40	1.35	1.45	1.35	1.55	1.55	1.55	1.5
Sept.	1.35	1.35	1.35	1.35	1.55	1.55	1.55	1.5
Oct.	1.35	1.35	1.35	1.35	1.55	1.55	1.55	1.5
Nov.	1.35	1.35	1.35	1.35	1.55	1.50	1.55	1.5
Dec.	1.35	1.35	1.35	1.35	1.50	1.50	1.50	1.5
Year	3.00	1.35	2.50	1.35	1.75	1.25	1.90	1.3

Rio, Twelve Years' Prices

	Per pound	
	H.	L.
1922	$1.90	$1.35
1921	2.50	1.35
1920	3.50	2.50
1919	4.00	2.50
1918	4.75	3.00
1917	3.10	2.00
1916	2.65	2.55
1915	5.50	1.70
1914	2.00	1.42
1913	2.20	1.75
1912	2.35	1.45
1911	2.30	1.75

Jalap

On October 18, 1871, the price was 40c.; 1881, 18@20c.; 1891, 50@52½c.; 1901, 12@14c.; 1911, 33@35c.; 1913, 15@16c.; 1919, August, 80c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.35	$0.35	$0.15	$0.1
February	.25	.25	.15	.1
March	.25	.25	.15	.1
April	.25	.25	.18	.1
May	.25	.23	.18	.1
June	.23	.23	.18	.1
July	.23	.20	.18	.1
August	.20	.17	.20	.1
September	.17	.15	.19	.1
October	.15	.13	.22	.1
November	.13	.13	.30	.2
December	.13	.13	.34	.3
Year	.35	.13	.34	.1

Twelve Years' Prices

	Per pound	
	H.	L.
1922	$0.34	$0.13
1921	.35	.13
1920	.80	.35
1919	.80	.50
1918	.62	.47
1917	.50	.12
1916	.12	.08
1915	.10	.08
1914	.20	.10
1913	.23	.13
1912	.26	.22
1911	.40	.22

Licorice

On November 22, 1871, the price was 5c.; October 18, 1881, 5@6c.; 1891, 3½@5c.; 1901, 3¼@4c.; 1911, 4@4½c.; 1913, 4½@5½c.; 1918, May, 34c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.12	$0.12	$0.06	$0.06
February	.10	.10	.06	.06
March	.10	.07¼	.06	.06
April	.07¼	.07¼	.06	.06
May	.06½	.06	.06	.06
June	.06	.06	.06	.06
July	.06	.06	.07	.06
August	.06	.06	.07	.06½
September	.06	.06	.06½	.06½
October	.06	.06	.08	.06½
November	.06	.06	.08	.08
December	.06	.06	.08½	.08
Year	.12	.06	.08½	.06

Mandrake

On April 14, 1875, the price was 6@7c.; October 18, 1881, 5@6c.; 1891, 3¾@4¼c.; 1901, 4@5c.; 1911, 6@6½c.; 1913, 7@7½c.; 1920, February, 42c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.16	$0.15	$0.11½	$0.11½
February	.15	.15	.11½	.11½
March	.15	.12	.12	.11½
April	.11	.11	.12	.12
May	.11	.11	.12	.12
June	.11	.10	.11	.11
July	.10	.10	.11	.11
August	.10	.10	.15	.11
September	.10	.10	.17	.16
October	.11	.11	.17	.16
November	.11½	.11	.17	.16
December	.11½	.11½	.16	.16
Year	.16	.10	.17	.11

Orris, Florentine, Whole

On November 22, 1871, the price was 15@16c.; October 18, 1881, 15@19c.; 1891, 35@40c.; 1901, 9@11½c.; 1911, 9½@10c.; 1913, 15½@16½c.; 1918, October, 20c.

	Per pound			
	1921.		1922.	
	H.	L.	H.	L.
January	$0.08	$0.08	$0.08	$0.08
February	.08	.08	.08	.08
March	.08	.08	.08	.08
April	.08	.08	.08	.08
May	.10	.09	.08	.08
June	.09	.09	.08	.07
July	.09	.09	.07	.07
August	.09	.09	.07	.07
September	.09	.09	.07	.07
October	.09	.09	.07	.07
November	.09	.09	.07	.07
December	.09	.08	.07	.06
Year	.10	.08	.08	.06

Orris, Verona

On January 17, 1872, the price was 14c.; October 18, 1881, 8@10c.; 1891, 14@17c.; 1901, 4@6c.; 1911, 9@9½c.; 1913, 13½@14½c.; 1918, November, 28c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.06	$0.06	$0.06	$0.06
February	.06	.06	.06	.06
March	.06	.06	.06	.06
April	.06	.06	.06	.06
May	.06	.06	.06	.06
June	.06	.06	.06	.05
July	.06	.06	.05	.05
August	.06	.06	.05	.05
September	.06	.06	.05	.05
October	.06	.06	.05	.05
November	.06	.06	.05	.05
December	.06	.06	.06	.05
Year	.06	.06	.06	.05

Pink, True

On November 25, 1874, the price was 20c.; October 18, 1881, 25@30c.; 1891, 24@25½c.; 1901, 20@22c.; 1911, 30@40c.; 1913, 45@75c.; 1920, March, $4.50.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.60	$1.60	$0.75	$0.75
February	1.55	1.55	.75	.75
March	1.55	1.35	.75	.75
April	1.25	1.25	.75	.75
May	1.25	1.25	.75	.75
June	1.00	.95	.75	.70
July	.95	.95	.70	.70
August	.95	.90	.70	.70
September	.90	.90	.95	.80
October	.90	.90	.95	.95
November	.90	.85	1.15	1.00
December	.80	.80	1.05	1.05
Year	1.60	.80	1.15	.70

Rhubarb, High Dried

On October 18, 1871, the price was 55c.; 1881, 18c.@$1; 1890, 30@70c.; 1901, 17½@25c.; 1911, 10@17c.; 1913, 16@17c.; 1919, December, $1.90.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.60	$0.50	$0.60	$0.43
February	.50	.48	.70	.60
March	.45	.38	.80	.70
April	.38	.30	.80	.70
May	.30	.30	.70	.60
June	.30	.26	.60	.55
July	.26	.21	.55	.55
August	.23½	.23	.55	.49
September	.26	.28	.49	.45
October	.35	.28	.45	.45
November	.40	.35	.45	.45
December	.50	.43	.45	.45
Year	.60	.21	.80	.43

Sarsaparilla, Mexican

On October 18, 1871, the price was 17c.; 1881, 9¾@10½c.; 1891, 14@15c.; 1901, 7@7¼c.; 1911, 16c.; 1913, 18@19c.; 1918, March, 70c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.38	$0.38	$0.43	$0.42
February	.38	.38	.43	.43
March	.38	.38	.45	.43
April	.40	.38	.45	.43
May	.43	.40	.41	.40
June	.43	.41	.40	.37
July	.41	.41	.37	.36
August	.40	.39	.36	.35
September	.40	.40	.33	.30
October	.42	.40	.29	.25
November	.42	.42	.25	.24
December	.42	.42	.23	.23
Year	.43	.38	.45	.23

Thirteen Years' Prices

	H.	L.
1922	$0.45	$0.23
1921	.43	.38
1920	.47	.36
1919	.55	.30
1918	.70	.32
1917	.60	.13½
1916	.13	.10½
1915	.15	.09
1914	.30	.10
1913	.28	.14
1912	.19	.11
1911	.18½	.09
1910	.11	.08¾

Senega, Northwestern

On October 18, 1871, the price was $1.60; 1881, 57½@60c.; 1891, 40c.; 1901, 57c.; 1911, 55@57½c.; 1913, 66@68c.; 1920, January, $2.50.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.80	$0.70	$0.80	$0.75
February	.70	.70	1.10	.75
March	.70	.65	1.10	1.10
April	.70	.70	1.00	1.01
May	.70	.60	1.10	1.00
June	.65	.60	.95	.91
July	.65	.60	.80	.74
August	.70	.60	.80	.75
September	.75	.75	.75	.75
October	.75	.75	.80	.75
November	.80	.75	.77	.75
December	.80	.80	.77	.75
Year	.90	.60	1.10	.74

Thirteen Years' Prices

	H.	L.
1922	$1.10	$0.74
1921	.90	.60
1920	2.50	.90
1919	2.40	.90
1918	1.05	.80
1917	.85	.60
1916	.68	.40
1915	.45	.35
1914	.50	.38
1913	.80	.63
1912	.65	.59
1911	.60	.42
1910	.60	.43

Squills, White

On November 22, 1871, the price was 6@6½c.; October 18, 1881, 6@7c.; 1891, 5½@7½c.; 1901, 3¾@4c.; 1911, 3¾@5c.; 1913, 6@8c.; 1918, November, 16c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.09	$0.08	$0.05	$0.05
February	.07	.07	.05	.05
March	.07	.07	.05	.04½
April	.07	.07	.04½	.04½
May	.07	.07	.04½	.04½
June	.07	.06	.04½	.04½
July	.06	.06	.04½	.04½
August	.06	.06	.04½	.04
September	.06	.05	.04	.04
October	.05	.05	.04	.04
November	.05	.05	.04	.04
December	.05	.05	.04	.04
Year	.09	.05	05	.04

Valerian, Belgian

On November 22, 1871, the price was 20@35c.; October 18, 1881, German, 12@13½c.; 1891, 7½@8c.; 1901, 5½@6c.; 1911, 13@13½c.; 1913, 9½@10c.; 1919, January, $1.65.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.14	$0.14	$0.10	$0.10
February	.15	.14	.09	.09
March	.14	.14	.09	.09
April	.14	.14	.09	.09
May	.14	.13	.09	.09
June	.13	.11	.10	.09
July	.11	.11	.13	.11
August	.11	.11	.14	.13
September	.11	.11	.13	.13
October	.11	.11	.13	.13
November	.11	.11	.13	.12
December	.11	.10	.12	.12
Year	.15	.10	.13	.09

Seeds

Anise, Spanish

On November 22, 1871, the price of German was 14c.; October 18, 1881, 9@10c.; 1891, German, 5½@7c.; 1901, Russian, 5½@6c.; 1911, Spanish, 8¼@9c.; 1913, 8½@9½c.; 1917, February, 30c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.15½	$0.15	$0.10	$0.15½
February	.14¾	.14½	.16	.16
March	.14½	.14	.17	.16¼
April	.15	.14¾	.17½	.17¼
May	.14¾	.14¾	.17¼	.17
June	.14¾	.14¾	.18	.17¼
July	.14¾	.14¾	.18½	.18¼
August	.14¾	.14½	.19	.18½
September	.14¾	.15	.18½	.18¼
October	.15	.13½	.19	.18¼
November	.13½	.15	.19½	.19
December	.15½	.12½	.19½	.15½
Year	.15½	.12½	.19½	.15½

Canary

SPANISH

On June 12, 1871, the price was 3½c.; October 18, 1881, 4@4¼c.; 1891, 2½@2¾c.; 1901, Smyrna, 2⅝@2¾c.; 1911, Smyrna, 3¼@3¾c.; 1913, Smyrna, 5½@5¾c.; 1918, September, Spanish, 25c.; 1920, nominal; 1921, nominal.

SOUTH AMERICAN

On May 28, 1906, 4c.; October 18, 1911, 3⅛@3¾c.; 1913, 5½@5¾c.; 1918, September, 25c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.04¾	$0.04½	$0.03½	$0.03¼
February	.04½	.04	.04	.03½
March	.04	.03½	.04¼	.04¼
April	.03½	.03½	.04¼	.04¼
May	.03½	.03½	.04¼	.04¼
June	.03½	.03½	.04¼	.04
July	.03½	.03½	.04	.03⅞
August	.04½	.03½	.04	.03⅞
September	.04½	.04	.04	.04
October	.04	.03¾	.04⅝	.04¼
November	.03½	.03	.04½	.04½
December	.03½	.03¼	.05	.04½
Year	.04¾	.03	.05	.03¼

Cardamom, Bleached

On October 18, 1871, the price was $2.80@2.85; 1881, $2@2.25; 1891, 60@80c.; 1901, 55@85c.; 1911, 62@$1.25; 1913, $1.25@1.75; 1919, December, $2.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.80	$0.80	$0.60	$0.50
February	.90	.80	.50	.50
March	.90	.90	.50	.50
April	.90	.90	.50	.50
May	.90	.80	.50	.50
June	.80	.80	.50	.50
July	.80	.80	.55	.50
August	.90	.80	.60	.55
September	.70	.65	.85	.68
October	.65	.65	.85	.85
November	.65	.65	.85	.85
December	.60	.60	.85	.85
Year	.90	.60	.85	.50

Caraway, African

On October 18, 1871, the price was 11½c.; 1881, Dutch, 6¾@7c.; 1891, 5@5¼c.; 1901, Dutch, 5½@6c.; 1911, Dutch, 6½@7c.; 1913, 7¼@7½c.; 1918, November, 69c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.09	$0.08	$0.07½	$0.07¼
February	.08	.08	.09	.07½
March	.08	.06½	.6.½	.09¼
April	.06¾	.05⅞	.09½	.09½
May	.06	.05⅞	.09¾	.09½
June	.07	.06¼	.13	.09¾
July	Nominal		Nominal	
August	Nominal		Nominal	
September	Nominal		Nominal	
October	Nominal		Nominal	
November	Nominal		Nominal	
December	.07½	.07¼	Nominal	
Year	.09	.05⅞	.13	.07½

Celery

On October 7, 1879, the price was 15@16c.; October 18, 1881, 12½@14c.; 1891, 17c.; 1901, 7½@8c.; 1911, 20@23c.; 1913, 12@13c.; 1918, October, 70c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.14	$0.14	$0.13¼	$0.13
February	.14	.14	.15½	.13¼
March	.13	.12	.18	.16¾
April	.13	.13	.19½	.18½
May	.15	.12½	.23½	.21
June	.15	.14½	.23	.21¼
July	.15	.14½	.21½	.20¼
August	.15	.14½	.20	.20
September	.14½	.14½	.20	.19
October	.14½	.13½	.20	.20
November	.13¾	.13¼	.23	.20
December	.13	.13	.23½	.23
Year	.15	.12	.23½	.13

Eleven Years' Prices

	H.	L.
1922	$0.23½	$0.13
1921	.15	.12
1920	.32	.15
1919	.55	.32
1918	.70	.26½
1917	.30	.18
1916	.30	.18¼
1915	.35	.14
1914	.40	.14
1913	.45	.12
1912	.30	.15

Coriander, Bleached

On October 18, 1871, the price was 9c.; 1881, 5@6c.; 1891, 3¾@4c.; 1901, 3@3½c.; 1911, 3¾@4c.; 1913, 6¼@6½c.; 1917, June, 25½c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.07	$0.07	$0.06	$0.05½
February	.07	.07	.08½	.08½
March	.07	.07	.08½	.08½
April	.07	.07	.08½	.08½
May	.07½	.06½	.08½	.08½
June	.07½	.07½	.08½	.08½
July	.07½	.07	.09	.08½
August	.08	.07	.09½	.09
September	.09	.08	.15	.13
October	.09	.09	.16	.15
November	.09	.08½	.16	.16
December	.08½	.08½	.16	.16
Year	.09	.06½	.16	.05½

Foenugreek

On November 22, 1871, the price for powdered seed was 6@7c.; October 18, 1881, whole seed, 3½@4c.; 1891, 2¾@2¾c.; 1901, 1⅞@2c.; 1911, 2½@2¾c.; 1913, 3@3½c.; 1918, May, 15c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.02½	$0.02	$0.03	$0.02¾
February	.03	.02¼	.02¾	.02½
March	.03	.02¾	.03½	.02¾
April	.02¾	.02	.03¾	.03½
May	.02	.01¾	.04	.03¾
June	.02½	.01¾	.03¾	.03⅝
July	.02¾	.02½	.04½	.04
August	.03	.02¾	.04½	.04¼
September	.03	.03	.04¾	.04¼
October	.03	.03	.05½	.05
November	.03	.02¾	.05½	.05½
December	.03	.02¾	.07	.05½
Year	.03	.01¾	.07	.02½

Mustard, California, Brown

On October 18, 1871, the price was 13@15c.; 1881, 6c.; 1891, 4¾@5c.; 1901, 4½@5c.; 1911, 6¼@6½c.; 1913, 4¾@5c.; 1918, November, 31c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.07	$0.07	$0.05¼	$0.04¾
February	.06½	.06	.05	.04¾
March	.05¾	.05⅝	.06	.05¼
April	.05¾	.05½	.06¼	.06
May	.05½	.05½	.06	.06
June	.05	.05	.07	.05¾
July	.05	.04¼	.07⅝	.07¼
August	.04½	.04¾	.07½	.07½
September	.04½	.04½	.07⅝	.07½
October	.05¼	.04¾	.07¾	.07¾
November	.05¼	.05¼	.07⅝	.07¾
December	.05½	.05¼	.08⅜	.07¾
Year	.07	.04¼	.08⅜	.04¾

Stramonium

On April 2, 1878, the price of powder was 18@20c.; October 18, 1881, whole, 8@9c.; 1901, 9c.; 1911, 8@8½c.; 1913, 8@8½c.; 1918, June, 45c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.24	$0.24	$0.14	$0.14
February	.24	.24	.14	.14
March	.24	.24	.14	.14
April	.24	.24	.14	.14
May	.24	.24	.14	.14
June	.24	.24	.14	.13
July	.24	.24	.13	.13
August	.24	.24	.13	.13
September	.24	.24	.13	.13
October	.24	.24	.13	.13
November	.24	.24	.13	.13
December	.24	.14	.13	.13
Year	.24	.14	.14	.13

Worm, American

On April 2, 1878, the price of powder was 12@15c.; October 18, 1881, whole, 5@6c.; 1901, 9½@10c.; 1911, 6@7c.; 1913, 10@11c.; 1920, August, 30c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.19	$0.19	$0.10	$0.10
February	.19	.19	.10	.10
March	.16	.16	.10	.10
April	.16	.12	.10	.10
May	.12	.12	.10	.10
June	.12	.12	.10	.10
July	.12	.12	.10	.10
August	.12	.10	.10	.10
September	.10	.10	.10	.10
October	.10	.10	.10	.10
November	.10	.10	.10	.10
December	.10	.10	.10	.10
Year	.19	.10	.10	.10

Worm, Levant

On April 2, 1878, the price of powder was 26@27c.; October 18, 1881, whole, 10½@11c.; 1901, 8@10c.; 1911, 19@20c.; 1913, 30@33c.; 1920, July, $1.45.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$1.30	$1.10	$1.65	$1.45
February	1.10	1.10	1.65	1.65
March	1.10	1.10	1.75	1.75
April	1.10	1.10	2.00	1.90
May	1.10	1.10	2.25	2.25
June	1.20	1.10	2.25	2.25
July	1.20	1.20	2.25	2.25
August	1.20	1.20	3.00	2.25
September	1.30	1.30	3.00	2.75
October	1.30	1.30	3.50	3.50
November	1.30	1.30	3.50	3.50
December	1.30	1.30	3.50	3.23
Year	1.30	1.10	3.50	1.45

Spices

Cloves, Zanzibar

On May 28, 1875, the price for ground was 41@50c.; October 18, 1881, 29@30c.; 1891, 8@8¼c.; 1901, 8@8¼c.; 1911, 16½@17c.; 1913, 16½@16¾c.; 1919, December, 55c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.24	$0.20	$0.35½	$0.34
February	.18	.18	.32½	.32
March	.20	.16	.32½	.31½
April	.19	.18¾	.31½	.30
May	.18½	.18	.30	.29½
June	.18	.17½	.29	.28
July	.20	.17	.29	.27
August	.24	.20½	.31½	.29
September	.26¾	.24	.37	.33
October	.31	.27	.34	.31
November	.37½	.36	.32	.29½
December	.35½	.35	.32½	.32½
Year	.37½	.16	.37	.27

Twenty-two Years' Prices

	H.	L.
1922	$0.37	$0.27
1921	.37½	.16
1920	.50	.24
1919	.55	.19
1918	.49	.43
1917	.55	.19½
1916	.20	.16½
1915	.21	.15⅜
1914	.22	.14½
1913	.21½	.15
1912	.20½	.10⅝
1911	.19	.12
1910	.15½	.10
1909	.11½	.09½
1908	.12	.10
1907	.18½	.11
1906	.15	.13
1905	.14½	.08½
1904	.19	.13
1903	.10½	.07½
1902	.09	.08
1901	.09½	.07⅞

Nutmegs, 110s

On January 12, 1881, the price of prime to ordinary was 27½@30c.; October 18, 1881, 65@84c.; 1891, 105s to 110s, 60@61c.; 1901, 22½@23c.; 1911, 14¾@15c.; 1913, 14@14¼c.; 1918, August, 39c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.17	$0.17	$0.18	$0.17½
February	.17	.17	.19½	.18
March	.17	.17	.21	.20
April	.16	.15	.21	.21
May	.15	.14½	.20	.20
June	.17	.15	.20½	.20
July	.17	.15	.20½	.20
August	.16	.15	.20½	.20
September	.16	.15	.20½	.20
October	.14½	.14	.21	.20½
November	.17¾	.15	.22	.22
December	.17½	.17¼	.22½	.22½
Year	.17½	.14	.22½	.17½

Pepper, Singapore, Black

On April 28, 1875, the price of ground was 18@25c.; October 18, 1881, whole, 16½@17c.; 1891, 8½@8¾c.; 1901, 12⅝@12¾c.; 1911, 11¾@11½c.; 1913, 11¾@12c.; 1918, May, 28½c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.10½	$0.08½	$0.10	$0.09½
February	.10½	.10½	.10	.10
March	.10½	.10¾	.10½	.10
April	.10	.09¾	.10½	.10½
May	.09¾	.09	.10½	.09¾
June	.09½	.08¾	.09¾	.09⅝
July	.09	.08¾	.10	.09¾
August	.09	.08¾	.09⅝	.09¼
September	.08¾	.08¼	.09¾	.09⅝
October	.08½	.08	.09⅞	.09⅝
November	.08½	.08	.09¾	.09¾
December	.09	.08	.10	.09¾
Year	.10½	.08	.10½	.09¼

Pepper, Lampong

On April 28, 1875, the price on ground was 18@25c.; October 18, 1881, whole, 16½@17c.; 1891, 8½@8¾c.; 1901, 12⅝@12¾c.; 1911, 11@11¼c.; 1913, 10¾@11c.; 1918, May, 28½c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.10¼	$0.08½	$0.07½	$0.07½
February	.10	.10	.08	.07½
March	.10¼	.10	.08⅝	.08¼
April	.10	.09	.08½	.08¼
May	.09¼	.09	.08⅝	.08⅝
June	.09½	.08¼	.08⅝	.08
July	.08½	.08	.07¾	.07½
August	.08½	.08½	.07⅝	.07½
September	.08	.07½	.07⅝	.07½
October	.07¼	.07	.08¼	.07⅝
November	.07	.06¾	.08¼	.08¼
December	.07¼	.06½	.09¼	.08⅝
Year	.10¼	.06½	.09¼	.07½

Pepper, Singapore, White

On April 28, 1875, the price on powder was 30@36c.; October 18, 1881, whole, 22½@23½c.; 1891, 14¾@15c.; 1901, 19½@19⅝c.; 1911, 16¾@17c.; 1913, 20@20½c.; 1919, August, 34½c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.17½	$0.16½	$0.14	$0.13½
February	.17½	.17½	.14½	.13½
March	.17	.16½	.14½	.13¾
April	.16	.16	.13⅝	.13½
May	.16	.15¾	.13¾	.13¾
June	.15½	.15¾	.13⅝	.13½
July	.15¾	.15	.13½	.13
August	.15	.14½	.13	.13
September	.14¾	.14½	.13	.12⅞
October	.14⅝	.14	.13	.12⅞
November	.14¾	.14	.12¾	.12⅞
December	.14	.13⅝	.13¼	.12⅞
Year	.17½	.13⅝	.14½	.12⅞

Peppers, Chillies, Japan, No. 1

On April 28, 1875, the price of ground African was 30@32c.; October 18, 1881, whole, Bombay, 13@14c.; 1891, Bombay, 8½@9c.; 1901, Japan, 10⅝@11c.; 1911, 12@12¼c.; 1913, 8¼@8¾c.; 1921, October, 42c.

	1921. H.	1921. L.	1922. H.	1922. L.
January	$0.24	$0.24	$0.42	$0.42
February	.27	.21½	.42	.42
March	.30	.27	.42	.42
April	.30	.30	.42	.37
May	.30	.30	.37	.37
June	.30	.30	.40	.37
July	.30	.30	.40	.40
August	.40	.30	.42	.40
September	.40	.40	.42	.42
October	.42	.40	.39	.39
November	.42	.42	.37	.37
December	.42	.42	.37	.32
Year	.42	.21½	.42	.32

Cosmetic Demand in Cuba

Owing to the almost universal use of powders, rouges, creams and so on by the women of Cuba, there is always an excellent market for toilet accessories of this character, says Harriet Williams, clerk in American consulate general, Havana, in a report to the Bureau of Foreign and Domestic Commerce. Most of the fine soap imported originates in the United States, although a small amount of French soap costing twice as much per kilo is imported, and some English soap as well. In the case of perfumery and cosmetics, Cuba obtains about one-half of its supplies from the United States, but the French preparations exceed the American in aggregate value. A considerable quantity of American face powder is being handled in Cuba, but the essences, extracts, and perfumery most in demand are of French origin. The Cuban public has been so long accustomed to buying French toilet requisites that considerable advertising will have to be done to acquaint the people with American manufactures.

Essential Oils: Market Review

A review of essential oils for the year 1922 hinges almost entirely on the tariff act which was signed by the President September 21, 1922, at 11.10 a. m.

The new act placed on the free list all essential oils except clove, eucalyptus, lemon, orange, patchouli, peppermint and sandalwood. Of these oils lemon and orange were increased 15 per cent.; peppermint remained unchanged; the balance were advanced from 20 per cent. to 25 per cent. ad valorem.

In the act of 1913 the duty on all oils not specifically provided for was 20 per cent. Under the new law these were placed on the free list.

The effect on the market was immediate and pronounced. For about a month after the law went into effect the market was generally soft and developed lower prices. This was due to two influences: (1) Arrival of replacements that came in without duty, and hence showed a lower cost of importation; (2) the forced sale of stocks purchased under the 1913 act, which could not compete with the replacement situation.

A clear and concise picture of the effect produced on the market by the free listing of a majority of essential oils can be gained from a comparative tabulation.

Such a presentation is made below. In choosing the prices for comparison, The Reporter of August 7 was taken as being far enough removed from the time of the act going into effect to allow values to be more or less representative. However, the reader should bear in mind that importers and dealers felt more or less certain that all oils except those mentioned above would be on the free list; hence, they began to reduce stocks somewhat before that date. No general liquidation was attempted, however. By November 6 most of the readjustment of spot quotations to the free entry of replacements had been made.

How Prices Changed

With this explanation of the purpose that dictated the choice of dates, the tabulation follows:

	Aug. 7.	Nov. 6.
Almond, bitter	$4.75	$3.75
sweet, true	.48	.42
Anise	.52½	.50
Bergamot	3.60	3.10
Bois de rose	3.00	2.35
Camphor	.19	.16
Cananga, native	4.00	3.20
Caraway	3.25	4.25
Cassia, rectified	1.80	1.65
Citronella, Ceylon	.77½	.47
Java	.75	.70
Geranium, Bourbon	5.50	5.00
Lavender, oil of flowers	2.75	2.75
Spanish spike	.80	.75
Lemongrass	.95	.75
Lime, expressed	2.75	2.00
Linaloe	2.40	2.15
Origanum	.25	.25
Palmarose	4.50	4.50
Petitgrain, Spanish	1.75	1.60
Rose	8.00	6.00
Rosemary, Spanish	.42½	.42½
Thyme, red	.95	.90
white	1.05	1.00
Ylang ylang, Bourbon	9.00	9.00

Analysis of the above table reveals one curious fact: caraway oil actually advanced at the time when the duty of 20 per cent. was removed. As the oil could be imported free of tariff after September 21, a downward revision in spot prices would seem to have been logical, due to the theoretically lower replacement cost.

As a matter of fact, the replacement costs advanced parallel with the removal of the duty. Conditions abroad were responsible. A short crop of caraway seed was followed by sharp rises in the cost of that material. This raised production costs of caraway oil, sent shipment prices higher, and naturally advanced the quotations for spot oil.

Real scarcity of the article developed in New York. Prices advanced steadily in a proportion about equal with the advances abroad. By the end of December, prices here had advanced to $6 to $7 per pound, with only jobbing quantities offered at any price.

Three oils failed to show any change in price following removal of the duty. Palmarosa oil is otherwise known as Turkish geranium. Although the import cost was reduced by the removal of duty, there was hardly any of this article available here and hence the market held firm. Lavender oil had been low priced for a long time, the quotation depending solely on the quality of oil offered. There had been considerable oil of U.S.P. VIII specifications in the market and it had been priced considerably under the U.S.P. IX. Most of the call is for the latter grade oil. Under these conditions of competition the prices were already so low as to nullify the effect of the free entry of the article. Origanum, the third oil showing no change, is a manufactured product the price of which can be made to suit the ideas of any buyer by the addition or subtraction of turpentine. Hence it showed no change. It is an insignificant item at the best.

From the above, readers of this review may well understand how great was the new tariff in its effect on the essential oil market. It may be illustrated in another manner, which, also, is indicative of the general progress of the market throughout the year. This medium for expressing market conditions is the Reporter's Index Numbers of the essential oil market.

Index to Market Trend

A tabulation of the Index Numbers over the critical period of tariff changes is as follows:—

Normal—19

Date.	Index Number.
August 7	250
August 14	258.5
August 21	258.8
August 28	255.2
September 4	256.3
September 11	252.8
September 18	249.2
September 25	245.8
October 2	236.7
October 9	234.7
October 16	230.1
October 23	230
October 30	231.6
November 6	230.4
November 13	231.2
November 20	228.7
November 27	227.5

By the end of November the immediate effect of the elimination of tariff duties on most oils was ended; but other conditions developed to the end that the index number for December 31 was 236.1, showing a considerable reaction upward in prices during the last month.

Conditions that followed the free listing of so many oils have been thoroughly discussed. Mention must also be made of the unusual developments that came in orange and lemon oils.

According to the provisions of the new tariff, the duty on these oils was raised 15 per cent.—from 10 per cent. to 25 per cent. ad valorem. The higher duty might have been logically expected to raise the import cost of these materials and, consequently, to have advanced the spot prices to consumers. It might have been logical, but it did not happen.

Lemon oil remained at 65c. per pound on spot throughout August, September and October, barring the week of September 18, when 70c. was asked, and the last week in October, when 63c. was the price. On the strength of the higher tariff, the spot tried for a higher level of prices in the week of September 18, just before the signing of the tariff act. The trial failed, quotations dropping back immediately to 65c. In the last week in October the market actually declined in face of the higher duties being assessed at that time. During the first three weeks of November that price was retained. In the fourth week an advance to 67½c. took place, which quotation continued to the end of the year.

It will be seen that the higher tariff was absolutely without effect on spot prices as to lemon oil; the article remained steady. Even the November advance brought the market but 2½c. above its position under the old tariff. Had the tariff affected the article the increase ought to have been about 7c., based on the primary market price of 45c. in bond delivered New York.

As to orange oil, the price trend was distinctly downward throughout the critical time of tariff readjustment. Throughout August and during the first two weeks of September $2.75 per pound was the spot price. During the week of September 18 the market declined to $2.70, to be followed by another decline in the next week, making the price $2.65 per pound. This decline of 10c. within two weeks took place at the time when the duty was raised 15 per cent. During October $2.65 per pound was the market, but the first week in November found prices again cut, this time 15c. per pound, making the market $2.50. That figure was continued throughout the balance of the year.

From the above subject matter the reader gains a fair idea of (1) the effect of the new tariff act and, (2) of the weakness of citrous oils in the face of the sharply higher duties. Over, beyond and simultaneously with the situation as presented were interesting developments as affecting individual oils in the market.

The Case of Cassia and Clove

For example, cassia oil proved to be an article in which conditions wrought considerable change in the methods of doing business. The change, incidentally, resulted in prices showing a considerable rise.

Early in the year conditions in this oil were very steady, especially during the first quarter. Along about March the government suddenly stepped in and placed severe restrictions around the sale of technical cassia. Before each sale was made the buyer had to submit an affidavit stating the purpose for which the technical oil was bought, the idea being to prevent its sale for other than technical purposes. An attempt was made to force importers to sell large imports as a unit to an individual consumer. This meant that, for example, if an importer brought in twenty cases in one importation the entire lot would be sold as a unit.

The trouble—not to say danger of prosecution—that the imposed conditions gave rise to tended to make sellers withdraw from the merchandising of the technical article. The goods on hand were turned into redistilled U. S. P. oil, and technical oil imported after the regulations went into effect was promptly made over into the U. S. P. material.

In a sense this eliminated a major part of the trading in technical oil and hence technical and lead free oil was not quoted consistently enough to provide a real market value. The market became truly nominal.

Redistilled U. S. P. oil fluctuated between the range of $1.60 per pound in April and $2.15 per pound in December, with prices mostly being between $1.65 and $1.90 per pound for the greater part of the year. It closed the year fairly firm and showed an upward trend in prices.

Clove oil is also worthy of special mention. Opening the year at $2.30 per pound, the presence of an adequate supply of clove spice resulted in prices declining steadily throughout the first six months of the year. The low came in July, when oil sold at $1.80 per pound. Over the balance of the year prices showed an upward trend. A high of $2.35 per pound was struck in September, after which a reaction to $2 per pound took place during October. From then to the end of the year stronger undertone prevailed and quotations rose to the firm position of $2.25 per pound in December.

In the latter month a decline to $2 per pound came almost precipitately. This was due to the situation in spice. During the last quarter of the year the primary market for spice reported a large crop and quoted steadily declining prices. Some spice was sold as low as 15¼c. per pound laid down in New York. Large quantities were taken at 16c. per pound by the distillers here.

As the end of the year approached first deliveries of the cheap spice were expected and hence, as future deliveries of oil could be had very cheaply as compared with spot quotations, the latter weakened. Predictions of clove oil at $1.50 per pound for spot were freely made.

They did not materialize. Suddenly, cables from the primary market were shot to the spot in large numbers. These cables were orders for the importers here to buy back the contracts made earlier in the last quarter on low cost spice. This situation bridged over into the new year of 1923 and resulted in a real scarcity of oil, higher prices for spots, uncertainty as to futures, and a heavy demand for spot spice for which premium prices were paid.

After the shorts had covered fairly well, the situation quieted down and oil again sold lower, $1.90 per pound being named. When the position of the article seemed once more to be in hand, several thousand bales of spice arrived in New York. The stuff was badly needed and attempts to hurry the article through the Department of Agriculture were made.

They failed. Almost the entire lot was held up and at this writing there still is doubt of the department allowing the goods to enter.

From the above data on clove oil it can be readily understood that the article passed through an active and, at times, a very speculative twelvemonth.

Peppermint Showed Action

Peppermint oil in the local market provided also considerable action as to prices. Beginning the year at $1.70 per pound, the first six months of the year witnessed a gradual advance in prices until in July $2 per pound was secured. At that time, things began to happen in the primary market. In place of there being a large and liberal distillation, reports came in that showed severe curtailment of production.

In the West, large dealers and consumers began to buy heavily and certain spot dealers joined in, being apparently scared and determined to cover requirements. Up went prices on spot and in the West. The rise was abrupt and ended with $3.25 per pound being paid on spot during August and September.

Toward the end of the latter month the heavy buying dropped off almost as suddenly as it began. Prices weakened. They touched as low as $2.60 per pound in November and ended the year under a reaction upward to $2.85 per pound.

Spot dealers paid as high as $3.10 per pound during the rising market at the source of supply and that price compares with earlier expectations of a large crop to be had at prices lower than those paid for the 1921 crop. One large dealer had declared that he expected to buy 1922 crop as low as $1.25 per pound and intimated that he actually did at one time approach that figure.

Toward the close of the year the short crop was generally admitted; but it was declared that the precipitate attack on the primary market in an effort to secure oil at the time when the large Western interests were covering was a very unwise move on the part of local sellers. It was alleged that they raised prices against themselves and, judging from the undertone of the primary market late in the year, there seemed to be real justification for the allegation.

The opening of the new year found the article very dull on spot. In the primary market there existed considerable quantities of oil held in first hands and some pressure to sell seemed to have developed at the source of supply.

Essential oils at the close of the year were generally considered to be on a fairly steady basis. Most importers and dealers indicated that business in 1922 had been fair and that some real money had been made despite the upset conditions that followed the tariff enactment and the somewhat speculative position of several important oils. There was a feeling abroad that gave promise for a profitable business in 1923 and most of the trade faced the new year with a modicum of optimism and a large amount of confidence in their ability to carry on to successful business during the new year.

Essential Oils: Record of Prices

Almond, Bitter

On May 29, 1872, the price was $14; October 18, 1881, $4.50@7.50; 1891, $4.50@7.25; 1901, 83.50@4.25; 1911, $3.50@5; 1913, $3.50@6.50; 1917, November, $13.

	Per pound— 1921. H.	1921. L.	1922. H.	1922. L.
January	$9.00	$9.00	$5.75	$5.75
February	9.00	9.00	4.75	4.75
March	9.00	7.00	4.75	4.75
April	7.00	7.00	4.75	4.75
May	7.00	7.00	4.75	4.75
June	7.00	7.00	4.75	4.75
July	7.00	7.00	4.75	4.75
August	7.00	6.40	4.75	4.75
September	6.40	6.40	4.75	4.75
October	6.40	5.75	4.75	4.25
November	5.75	5.75	3.75	3.50
December	6.25	5.75	3.75	3.75
Year	9.00	5.75	5.75	3.50

Almond, Artificial, U. S. P.

On January 20, 1902, the price was 75c.@$1; October 18, 1911, 48@85c.; 1913, 40@45c.; 1917, January, $5.

	Per pound— 1921. H.	1921. L.	1922. H.	1922. L.
January	$1.00	$1.00	$1.45	$1.45
February	1.00	1.00	1.45	1.45
March	1.00	1.00	1.45	1.40
April	1.00	1.00	1.40	1.40
May	1.50	1.50	1.40	1.40
June	1.50	1.40	1.40	1.40
July	1.45	1.40	1.40	1.40
August	1.45	1.45	1.40	1.40
September	1.45	1.45	1.40	1.40
October	1.45	1.45	1.40	1.40
November	1.45	1.45	1.40	1.40
December	1.45	1.45	1.40	1.40
Year	1.50	1.00	1.45	1.40

Bergamot

On October 18, 1871, the price was $4.50@4.75; 1881, $2.45@2.50; 1891, $2.90@3.70; 1901, $2.50@2.75; 1911, $3; 1913, $6@6.50; 1918, September, $7.50.

	Per pound— 1921. H.	1921. L.	1922. H.	1922. L.
January	$6.00	$6.00	$5.00	$4.85
February	6.00	5.75	5.00	5.00
March	5.75	5.50	5.00	4.90
April	5.50	4.90	4.75	4.50
May	5.75	5.75	4.50	4.40
June	5.75	5.00	4.35	4.25
July	5.00	4.75	4.15	3.60
August	5.25	4.75	3.60	3.40
September	5.50	5.25	3.60	3.10
October	5.50	5.50	3.10	3.00
November	5.25	5.15	3.10	3.10
December	5.00	5.00	3.10	3.00
Year	6.00	4.75	5.00	3.00

Cassia, Technical

On October 18, 1871, the price was $2.10@2.15; 1881, $1; 1891, 95c.@1.10; 1901, 72½@75c.; 1911, 85@90c.; 1913, 85c.; 1918, November, $2.75.

	Per pound— 1921. H.	1921. L.	1922. H.	1922. L.
January	$1.10	$1.10	$1.25	$1.25
February	1.10	1.00	1.25	1.20
March	1.00	.90	Nominal	
April	.85	.70	Nominal	
May	.75	.70	Nominal	
June	.75	.75	Nominal	
July	.75	.75	Nominal	
August	.85	.80	Nominal	
September	.85	.85	Nominal	
October	1.15	.88	Nominal	
November	1.20	1.15	Nominal	
December	1.25	1.25	Nominal	
Year	1.25	.70	1.30	1.20

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MILTITZ (near Leipzig) GERMANY

AND

SOCIETE J. GRAS & CO., F. CHAUVET & CO. Successeurs

CANNES, FRANCE

Office and Warehouse - 82-84 Beekman Street, New York City
Shipping and Receiving - - 30 Ferry Street, New York City

Cassia, Lead-free

On February 1, 1909, the price was $1.55@1.65; October 18, 1911, $1.05@1.15; 1911, $1.05@1.15; 1913, 97½c.@1.07½; 1918, November, $2.90.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$1.20	$1.20	$1.30	$1.30
February	1.20	1.10	1.50	1.30
March	1.10	1.00	1.50	1.50
April	1.00	.80	Nominal	
May	.90	.80	Nominal	
June	.90	.90	Nominal	
July	.90	.90	Nominal	
August	1.00	.95	Nominal	
September	1.00	1.00	Nominal	
October	1.25	1.00	Nominal	
November	1.30	1.25	Nominal	
December	1.30	1.30	Nominal	
Year	1.30	.80	1.50	1.30

Cassia, Redistilled

On February 8, 1909, the price was $1.75@1.85; October 18, 1911, $1.25@1.40; 1913, $1.30@1.40; 1918, November, $3.75.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$1.50	$1.45	$1.65	$1.65
February	1.45	1.40	1.70	1.65
March	1.40	1.30	1.65	1.60
April	1.30	1.15	1.60	1.60
May	1.25	1.15	1.75	1.60
June	1.25	1.25	1.80	1.80
July	1.25	1.25	1.80	1.80
August	1.35	1.25	1.90	1.85
September	1.35	1.35	1.75	1.65
October	1.65	1.35	1.65	1.65
November	1.65	1.65	1.85	1.65
December	1.65	1.65	2.15	2.00
Year	2.45	1.25	2.35	1.60

Clove

On November 22, 1871, the price was $1.40@1.50; October 18, 1881, $1.90@2; 1891, 75@77½c.; 1901, 60@62½c.; 1911, 97½c.@$1; 1913, $1.15@1.20; 1917, November, $4.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$1.60	$1.50	$2.30	$2.20
February	1.50	1.40	2.20	2.15
March	1.40	1.30	2.15	2.15
April	1.40	1.30	2.10	2.05
May	1.30	1.30	2.05	1.95
June	1.30	1.25	1.95	1.90
July	1.50	1.25	1.85	1.80
August	1.75	1.45	2.00	2.00
September	1.95	1.75	2.35	2.25
October	2.25	1.95	2.15	2.00
November	2.45	2.40	2.25	2.00
December	2.45	2.30	2.25	2.00
Year	2.45	1.25	2.35	1.80

Geranium, Rose, Africa, Algeria

On November 22, 1871, the price was $8@10; October 18, 1881, $4.50@8.50; 1891, $7.50@8.50; 1901, $5.25@6.50; 1911, $4.25@4.50; 1913, $9.50@10; 1918, November, $11.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$7.25	$6.50	$5.00	$4.75
February	6.50	6.50	6.00	5.00
March	6.50	5.50	7.00	6.00
April	7.50	5.50	8.00	7.00
May	7.00	5.25	8.00	8.00
June	5.00	4.50	8.00	8.00
July	4.50	4.00	8.75	8.00
August	4.50	3.75	8.75	8.75
September	4.50	4.00	8.75	8.50
October	4.50	4.00	8.75	8.50
November	5.50	4.50	8.50	8.50
December	4.75	4.50	8.50	7.50
Year	7.25	3.75	8.75	4.75

Lemon, Messina

On October 18, 1871, the price was $3.75@5.12½; 1881, $3@3.25; 1891, $2.15@2.75; 1901, 85@95c.; 1911, $1.60@1.80; 1913, $3.75@4; 1920, March, $2.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.95	$0.85	$0.68	$0.65
February	.70	.70	.70	.65
March	.80	.70	.87	.75
April	.70	.65	.82½	.72½
May	.70	.70	.77½	.75
June	.70	.65	.75	.75
July	.75	.70	.65	.65
August	.75	.70	.65	.65
September	.75	.75	.70	.65
October	.75	.75	.65	.63
November	.75	.70	.67½	.65
December	.68	.67	.67½	.67½
Year	.95	.65	.87	.63

Twenty-two Years' Prices, Lemon

	Per pound— H.	L.
1922	$0.87	$0.63
1921	.95	.65
1920	2.00	.95
1919	1.85	1.05
1918	1.85	.87½
1917	1.20	1.05
1916	1.05	.90
1915	1.25	.95
1914	3.75	1.05
1913	4.75	2.20
1912	2.10	1.30
1911	1.65	.80
1910	.82½	.75
1909	3.00	.72½
1908	1.50	.70
1907	2.00	1.00
1906	1.20	.57
1905	.57½	.55
1904	.55	.50
1903	.70	.55
1902	.80	.65
1901	1.15	.80

Lavender, Flowers

On November 22, 1871, the price was $2.90@3; October 18, 1881, $2.10; 1891, $1.30@1.75; 1901, $1.20@1.30; 1911, $2.25@3.25; 1913, $3.75@4; 1919, December, $11.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$7.50	$7.50	$3.00	$2.75
February	7.50	6.50	2.75	2.75
March	6.50	6.50	2.75	2.75
April	6.50	6.00	2.75	2.75
May	6.00	5.75	2.75	2.75
June	5.75	5.75	2.75	2.75
July	5.50	5.00	2.75	2.75
August	5.00	4.25	2.75	2.75
September	4.25	4.25	2.75	2.75
October	4.25	4.00	2.75	2.75
November	4.00	3.25	2.75	2.75
December	3.25	3.15	2.75	2.75
Year	7.50	3.15	3.00	2.75

Orange, Italian

On April 2, 1873, the price was $3.75; October 18, 1881, $3@3.25; 1891, $2.80@3.12½; 1901, $1.20@1.50; 1911, $2.45@2.60; 1918, $3.75@4; 1920, June, $11.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$3.50	$3.25	$3.00	$3.00
February	3.25	3.00	3.00	2.90
March	3.00	2.75	2.90	2.90
April	2.75	2.60	3.10	3.00
May	2.75	2.75	3.10	3.10
June	2.60	2.65	3.10	3.00
July	2.80	2.60	3.00	2.75
August	3.00	2.80	2.75	2.75
September	3.25	3.00	2.75	2.65
October	3.15	2.75	2.65	2.50
November	3.00	3.00	2.50	2.50
December	3.00	3.00	2.50	2.40
Year	3.50	2.60	3.10	2.40

Orange, West Indian

On April 1, 1915, the price was $1.35; 1920, June, $6.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$2.75	$2.45	$2.15	$2.00
February	2.40	2.40	2.15	2.10
March	2.40	2.60	2.30	2.10
April	2.65	2.40	2.60	2.60
May	2.60	2.65	2.60	2.50
June	2.65	2.60	2.60	2.60
July	2.40	2.65	2.60	2.50
August	2.80	2.70	2.50	2.45
September	2.80	2.65	2.45	2.45
October	2.65	2.00	2.50	2.40
November	2.00	2.00	2.40	2.40
December	2.00	1.80	2.40	2.25
Year	2.90	1.80	2.60	2.00

Peppermint

On October 18, 1871, the price was $3.35@3.50; 1881, $2.40@2.80; 1891, $2.30@2.80; 1901, $1.65@1.80; 1911, $2.85@2.95; 1918, $3.40@3.80; 1919, March, $8.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$5.00	$4.45	$1.70	$1.70
February	4.00	4.25	1.70	1.70
March	3.75	3.25	1.70	1.70
April	3.25	2.60	1.60	1.75
May	2.60	2.40	1.85	1.75
June	2.40	2.25	1.90	1.85
July	2.25	2.10	2.00	1.90
August	2.10	1.75	3.25	2.10
September	2.00	1.90	3.25	3.00
October	1.85	1.75	2.90	2.70
November	1.75	1.75	2.60	2.00
December	1.70	1.70	2.55	2.60
Year	5.00	1.40	3.25	1.70

Twelve Year's Prices

	Per pound— H.	L.
1922	$4.25	$1.70
1921	5.00	1.70
1920	8.25	5.00
1919	9.00	5.25
1918	5.25	2.90
1917	3.60	2.20
1916	2.30	1.80
1915	2.40	1.35
1914	4.60	1.40
1913	3.85	2.75
1912	2.85	2.75
1911	2.90	2.25

Sandalwood, East India

On November 22, 1871, the price was $9.50@10; October 18, 1881, $7@8; 1891, $2.10@6; 1901, $3.50@3.75; 1911, $2.75@3; 1913, $5.50@6; 1917, December, $14.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$10.00	$9.75	$7.40	$7.15
February	9.50	9.00	7.15	7.10
March	8.75	8.50	7.20	7.10
April	8.00	7.75	7.20	7.15
May	7.75	7.00	7.15	7.10
June	6.75	6.75	7.10	7.10
July	6.75	6.75	7.10	6.90
August	6.75	6.75	6.90	6.85
September	6.75	6.50	6.85	6.75
October	6.65	6.50	6.75	6.75
November	7.25	6.65	6.75	6.75
December	7.40	7.25	6.90	6.75
Year	10.00	6.50	7.40	6.75

Sassafras, Natural, U. S. P.

On October 18, 1871, the price was $1.15@1.20; 1881, 57½@65c.; 1891, 38@42c.; 1901, 40@43c.; 1911, 70@75c.; 1913, 55@60c.; 1918, October, $2.50.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$1.65	$1.65	$1.00	$0.80
February	1.65	1.50	.90	.90
March	1.50	1.40	.90	.90
April	1.40	1.40	.90	.85
May	1.40	1.35	.85	.85
June	1.25	1.20	.85	.85
July	1.20	1.20	.85	.85
August	1.20	1.10	.85	.85
September	1.10	1.10	.85	.85
October	1.00	1.00	.85	.85
November	1.00	1.00	.85	.85
December	1.00	1.00	.85	.85
Year	1.65	1.00	1.00	.85

Spearmint

On June 5, 1872, the price was $4; October 18, 1881, $2@2.35; 1891, $1.85@2.35; 1901, $1@1.10; 1911, $4@4.50; 1913, $4; $1920, February, $13.50.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$6.25	$6.00	$2.50	$2.50
February	6.00	5.75	2.50	2.40
March	5.75	5.75	2.35	2.30
April	5.50	5.50	2.60	2.35
May	5.50	5.50	3.00	2.75
June	5.25	5.00	3.25	3.00
July	5.00	5.00	2.25	3.00
August	4.75	3.50	3.00	3.00
September	3.50	3.25	3.00	2.85
October	3.25	2.75	2.85	2.75
November	2.75	2.75	2.60	2.50
December	2.75	2.75	2.50	2.35
Year	6.25	2.75	3.25	2.30

Ten Years' Prices

	Per pound— H.	L.
1922	$3.25	$2.30
1921	6.25	2.75
1920	13.50	6.25
1919	12.00	5.50
1918	5.50	3.40
1917	3.65	1.85
1916	1.90	1.50
1915	1.75	1.35
1914	4.00	1.50
1913	4.85	4.00

Bulgarian Rose Essence Situation

The Bulgarian rose essence situation is a good illustration of the dependence of a national industry upon international commerce, says a report to the U. S. Department of Commerce from its special representative in Vienna, Austria. The report continues:—

Rose growing for commercial purposes has been practiced in Bulgaria for the past two hundred years. The industry in segregated in a district in the Balkan Mountains of which the centre is the village of Kazanlik about one hundred miles north of Philippopolis. Efforts to extend rose culture to other regions have been unsuccessful. The whole prosperity of this agricultural industry in a secluded mountain valley many miles from a railroad, is dependent upon the international perfume market, which centres in Paris. National production of rose essence was cut more than half through the isolation of Bulgaria during the war, and the industry has been slow to recover through the fact that the Paris trade has lost important custom in such countries as Germany and Russia.

Although some roses are grown commercially for their perfume in Asia Minor and southern France, Bulgaria has long held the premier position as a producer of the rose perfume known to the trade as attar of roses. At no time has the national production exceeded five tons annually, apparently a small output for any agricultural product. It must be remembered, however, that it takes 60,000 roses to make an ounce of rose essence. In 1913 around 20,000 acres were planted to roses with acreage curtailed in 1920 to 11,000 acres. Some slight increase took place in 1921 with further gains in 1922.

Production in 1921 was 55,800 ounces as compared with the pre-war (1913) output of 101,803 ounces. The post-war demand from the United States and Great Britain exceeds prewar, but the industry still suffers from the dislocation of old trade connections with Russia and Germany by way of Paris. Aside from the war the industry has suffered through poor marketing methods. Various compounds have been put on the market as pure Bulgarian rose essence which were either counterfeits or adulterations of the genuine article.

It is notorious that for years the volume of exports has exceeded the entire national production. This matter of adulteration has been taken in hand by the newly formed cooperative associations, which see to it that the standard of quality of Bulgarian rose essence put on the market by the co-operative associations, is fully maintained. It is estimated that 40 per cent. of the rose gardens in Bulgaria are now organized co-operatively.

French Primary Perfume Materials

Grasse, in the Department of Alpes-Maritimes, is the center for the manufacture in France of the primary materials used in making perfumery, such as floral concretes (produced by the action of petroleum ether dissolving the wax containing the scent of the flowers), enfleurage obtained by the absorption of the flower scents in grease), and essential oils (obtained by distillation of the blossoms). The annual output of these commodities, according to a report from Vice-Consul H. A. Lyons, Nice, to the Department of Commerce, is estimated at $20,000,000. Furthermore, floral products distilled in other parts of Southern France are, to a great extent, handled commercially at Grasse.

Before the war synthetic perfumery was manufactured chiefly in Germany. At the present time several of the larger plants at Grasse are making it, but in such small quantities, compared with the pure floral products, as not to enter into serious consideration.

Flower Prices Vary with Harvest

All the available land around Grasse is reserved for the cultivation of flowers, and the value of the Grasse products is based on the prices of the flowers, which vary considerably from year to year with the harvest. While, as can be seen from the schedule following, prices during the current year are running well below those of 1921 for several varieties and in some instances are only a fourth or a fifth of the prices in 1920, all are above the pre-war figures:—

Prices of French Flowers

Varieties	Francs— Before the war.	1920.	1921.	1922.
Jasmine	2.00–3.50	26.00	7.50	6.00
Tuberoses	3.15	36.25	12.50	7.00
Parma violets	4.50	36.00	20.00	...
Victoria violets	...	25.00	10.00	28.00
Violet leaves	...	.50	.30	.25
Roses	.50– .75	8.40	4.30	1.00
Orange flower	.50– .75	10.20	13.00	4.50–5.75
Cassia	...	20.00	17.50	17.00
Jonquil	2.00	...	12.00	12.40

These quotations are per kilo of 2.2046 pounds.

Crop Conditions and Quotations

Present-year crop conditions and prices for the leading varieties of flowers of the Grasse region can be thus briefly reviewed:—

Jasmine.—The picking of jasmine usually commences about the 20th of July and ends early in September. As this year's crop is as yet only partially gathered and a cold spell could still affect the flowers, a forecast of the harvest is at present impossible. Should warm and dry weather continue, it is estimated to be "medium good," the flowers being abundant. Jasmine is used principally in the production of enfleurage and sold as "absolue de jasmin," the average wholesale price being at present 13,000 francs per kilo ($472 a pound at current exchange of 12.50 francs to the dollar), and for jasmine concrete, 2,200 francs ($80 a pound).

Tuberoses.—The tuberose blooms from the middle of August until the middle of September. The scent is extracted from the flower in the same way as from jasmine. The forecast for this year's crop is "good," but it is too early in the season to give any definite figures. The average price at present asked for "absolue de tuberoses" is 8,500 francs per kilo ($308 a pound) and for concrete 1,760 francs ($64 a pound).

Violets and Roses

Parma Violets.—Parma violets were grown in abundance in the environs of Grasse before the war, but the cultivation of this flower has been abandoned, owing, it is stated, to its high price and the consequent prohibitive cost of the violet extract. It is expected, however, that the cultivation of the Parma violet will be resumed in the future. The violets now used are the so-called Victoria violets, which are grown around Hieres (Var). Violet leaves are distilled in large quantities and are used as a basis for violet perfumery. The average wholesale price asked for concrete of Victoria violets is 2,200 francs per kilo ($80 a pound), for "absolue of violet leaves" 6,000 francs ($218 a pound) and for violet-leaf concrete 1,500 francs ($54 a pound).

Roses.—Roses are picked from the beginning of May until the end of June. This year's crop was very abundant, and the flowers were offered in large quantities to the manufacturers at such reasonable prices that the stock on hand of both concrete and essential oil of roses is very large. The average price of 1,500 to 1,800 francs per kilo ($54 to $65 a pound) for essential oil has fallen to an average of 1,300 francs per kilo ($47 a pound).

Orange Flower and Geranium

Orange Flower.—The center for the cultivation of the orange flower is Valauris, a small town fifteen miles from Grasse. Cultivators of this flower have formed a union and own a distilling plant, which enables them to dictate to the perfumers in the matter of price. The flowers are picked in May and June. The price fixed by the union in the spring of this year was 5 francs per kilo, as the outlook at that time seemed unfavorable. The crop, however, turned out better than was expected (although still below the average) and growers outside the union sold their flowers at 4.50 francs a kilo. The orange blossom is one of the most important flowers for the Grasse industry, as the demand for neroli, or essential oil of the orange flower, concrete, and orange-flower water is large. The present average price for neroli is 3,300 francs per kilo ($120 a pound).

Geranium.—The essential oil of geranium constituted before the outbreak of the war one of the largest exports from Grasse. The principal geranium fields are in Algeria and on the Isle of Bourbon; and while this oil is considered inferior to the Grasse product it was imported in large quantities to Grasse for re-exportation. Due to the high cost and difficulties of transportation during the war the African oil of geranium is at present exported direct from the locality of its production. This oil, which in 1914 cost only 38 francs per kilo ($3.33 per pound at exchange of that date), was largely used in the soap industry. The price rose exorbitantly during the war, and its use for this purpose was abandoned. The price paid for essential oil of "geranium sur rose," a specialty of the Grasse perfumers, is now as high as 600 francs per kilo ($24 a pound).

Cassie, Jonquil, Aromatic Herbs

Cassie.—The cassie harvest takes place in October and November; it is therefore too early in the season to give even an approximate forecast of this year's crop. The concrete of cassie is quoted at about 5,500 francs per kilo ($200 a pound), and essential oil as high as 14,000 francs ($508 a pound).

Jonquil.—The gathering of jonquils takes place in April and May. This year's crop was a poor one, and consequently the stock on hand at Grasse of jonquil products is small. The average price for "absolue of jonquil" is 5,500 francs per kilo ($200 a pound), and for concrete 1,400 francs ($51 a pound).

The above-mentioned flowers are the most important for the Grasse perfume industry. Although there are numbers of other flowers, such as the carnation, mignonette and mimosa, they are of lesser commercial importance.

The distillation of lavender has begun, but is not as yet far enough advanced for a forecast of the quantity and quality of this year's production. The same applies to spike, thyme, mint and other aromatic herbs and shrubs.

Trade Reviving

The exorbitant prices paid for the primary articles of perfumery in 1920, when the demand was so great that in many cases the manufacturers were not able to fill orders on hand, preceded the slump of 1921, which ended in the practical stagnation of the whole perfume trade. In the last few months, however, an increasing demand for floral products has been experienced and orders have been received by most of the Grasse houses for their products at remunerative prices, especially from France the United States, Germany and South American countries.

Wintergreen, Sweet Birch

On November 22, 1871, the price was $4.40@4.50; October 18, 1881, $3.15@3.20; 1891, $1.80@1.90; 1901, $1.40@1.60; 1911, $1.35@1.75; 1913, $1.50@2; 1919, December, $6.25.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$5.10	$5.10	$2.15	$2.10
February	5.10	5.00	2.10	2.10
March	4.75	4.00	2.10	2.00
April	4.00	4.00	2.00	2.00
May	4.00	3.25	2.25	2.10
June	3.25	3.00	2.10	2.10
July	3.00	2.85	2.10	2.10
August	3.00	2.75	2.10	2.10
September	3.00	3.00	2.10	2.10
October	3.00	2.10	2.10	2.10
November	2.10	2.10	2.00	2.00
December	2.10	2.10	2.00	2.00
Year	5.10	2.10	2.25	2.00

Wintergreen, Leaf Gaultheria

On October 18, 1901, the price was $2.25@2.90; 1911, $1.25@$5; 1913, $4.25@4.50; 1919, September, $9.75.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$6.75	$6.75	$5.00	$5.00
February	6.75	6.75	5.00	5.00
March	6.75	6.75	5.00	3.50
April	6.75	6.75	4.25	3.50
May	6.50	6.00	4.25	4.25
June	6.00	5.75	4.25	4.25
July	5.75	5.75	4.25	4.25
August	5.75	5.50	4.25	4.25
September	5.50	5.50	4.25	4.25
October	5.50	4.75	4.25	4.25
November	5.00	5.00	4.00	4.00
December	5.00	5.00	4.00	4.00
Year	6.75	4.75	5.00	3.50

Wormseed

On November 22, 1871, the price was $2.50@2.60; October 18, 1881, $2.25@2.50; 1891, $1.40@1.50; 1901, $1.10; 1911, $3.75@4; 1913, $2@2.20; 1918, July, $11.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$3.25	$3.25	$4.50	$4.25
February	3.25	3.00	4.25	4.25
March	3.00	3.00	4.15	3.90
April	3.00	2.90	3.75	3.40
May	2.90	2.75	3.30	3.00
June	2.75	2.50	2.75	2.25
July	2.25	2.25	2.25	2.15
August	2.25	2.25	2.50	2.15
September	3.00	2.25	2.50	2.50
October	3.40	3.25	3.00	2.50
November	3.40	3.40	3.15	3.00
December	4.25	4.00	3.75	3.25
Year	4.25	2.25	4.50	2.15

Gums, Shellac, Waxes: Market Review

Gums and waxes were fairly strong items during the first half of the year. The trend of prices was upward on the whole in the first six months of the year, and even in the last six months of the period there was more or less firmness. However, prices showed a slight tendency toward decline. This tendency was restricted more to individual items than to the market as a whole and was caused by the general situation relating to supply and demand. There were materials—shellac was a notable example—in which the close of the year revealed a potentially strong market in which price advances were more or less certain to come.

Gums

It may prove of interest to review in detail some of the more prominent materials in this market. Gum aloes passed through an uneventful year. Opening at 7c. per pound for Curacao gum, the market at no time was higher than 7½c. and during the last seven months of the year remained unchanged at 6c. per pound. Supplies during that period were excellent and demand was not much beyond moderate requirements that the buyers found easily satisfied.

Arabic proved to be an active article throughout the year. The early part of the period was rather quiet, prices for the first three months remaining at 10½c. per pound. In the second quarter a sharp rise to 12½c. per pound followed reports of scarcity in shipment material from abroad. Prices jumped forward at the shipment points and the spot followed. Demand expanded steadily under the strong market conditions for the reason that importers and dealers advised strongly that consumers cover at the then prevailing prices, as conditions gave every promise of producing still further advances.

This view was substantiated in the third quarter of the year when the local market moved up to 16c. per pound. At that figure slightly more gum came out of the primary market and as demand had been pretty well covered during the rise, quotations eased off and for the balance of the year 15¼c. to 15⅝c. per pound prevailed, prices fluctuating quietly between the two figures. After the turn of the year, the advance was resumed and cleaned amber sorts sold at 21½c. per pound.

Camphor

Camphor was, as usual, high spirited, temperamental, subject to frequent fluctuations in price, and it altogether lived up to its reputation of being one of the most speculative materials in the market.

As far as American refined gum was concerned, the year was not particularly eventful. During the first quarter, refiners advanced prices 4c., quoting 96c. per pound. In the second, the price was dropped back to 90c. per pound. In the third quarter, 90c. per pound ruled unchanged, but in the final three months of the year two advances were made. One amounted to 3c., coming in November and making the price 93c.; the other was 3c. more and placed the market at 96c. per pound.

These changes in prices were more or less dictated by the trend in imported refined from Japan. Japanese goods during the first half of the year came in at very low prices and undersold the American refined so much as to divert most of the business to the Japanese material. For a long period the domestic makers found business confined to sales of powdered camphor and tablets.

During the year, refiners were, of course, subject to production costs based on the cost of crude camphor. For the most part, the cost of crude stood at levels so high as to make it virtually impossible for domestic refined to compete profitably with the imported article. This naturally led to the refiners turning to Japanese gum that could be had at prices that permitted a lower selling level than that based on refined made here from crude.

Viewed as an entity, the market of the domestic refiners was more or less subject to conditions affecting imported and the speculative turns in the latter market made it rather difficult to produce and sell American goods at profitable prices.

Japanese refined opened in January at 90c per pound. During the month it advanced to 92c. per pound. In February prices were as high as 96c. and as low as 91c. per pound. The downward movement in shipment costs began in March and spot prices followed closely. From 90c. in early March quotations dropped to 76c. per pound in May. June saw a slight recovery in values with 78c. and 79c. per pound prevailing. The market from that time on began to work higher. In June 79c. per pound was paid and in December the high for the year was reached at 94c. per pound. Hardly a month passed during the period of advancing prices but showed prices fluctuating 2 to 3 cents up or down; but the drift was steadily toward higher limits.

The stronger shipment market was laid at the door of a poor production of crude in Formosa. According to advices at hand, however, it would seem that any shortage in crude for shipment was partially offset by the production of Japanese refined. If the export figures from Japan are reliable, during the period January 1 to October 31, 1922, Japan exported 3,667,700 pounds. In the same period in 1921 her exports amounted to 1,157,400 pounds. These figures represent the export from Japan to the world. From Japanese sources the exports to the United States in January-October, 1922, totals 2,150,600 pounds; in same period of 1921, 190,700 pounds.

These figures point to the fact that there was a vast increase in demand for camphor throughout the world during 1922, and that most of it was satisfied by the shipment of Japanese refined gum rather than crude camphor. Of course, the celluloid companies received BB camphor for their production purposes.

The year, with respect to the Japanese Monopoly Bureau and the American makers of celluloid seemed to be the beginning of a period of what may prove to be more amicable relations. Early in the year there was a get together meeting between the resident commissioner representing the Formosa Monopoly and the manufacturers of celluloid. A plan was worked out that allowed the celluloid trade to indicate its needs and to allow for some discussion of prices. Prior to that the matter of supplies and prices had been very arbitrary acts committed ruthlessly by the Japanese Monopoly Bureau. The American users showed the Bureau that in a finish fight the Bureau would get the worst of it, and through the strength of their position they forced concessions in the ways of doing business. Of course back of the whole affair was the ever-present threat of American production of synthetic camphor on a scale permitting low prices and competition with the Japanese goods.

Camphor figured somewhat in tariff developments during the year. Some pretty wild proposals for a duty on synthetic or refined camphor were made by those interests backing up financially the production of synthetic in this country. However, in the end, imported refined and synthetic were raised 1c. to a duty of 6c. per pound. Crude was left unchanged at 1c. per pound. However, subsequent to the passage of the tariff and remaining unsettled after the turn of the year was the revival of the proposal to empower the President of the United States to impose a duty of 25c. per pound on imported refined and synthetic camphor at such time as he (the President) is convinced that 2,000,000 pounds of synthetic camphor are being produced in this country.

Shellac

The shellac market was the usual active, and, alternately, strong and weak affair that it always is. Subject to changing conditions at Calcutta, speculation of all kinds and descriptions, lack of demand in the United States, overwhelming demand in the same country, consumers on the whole displayed but one tendency that was fairly unanimous—namely, that at no time when shellac was cheap would they buy ahead. Inevitably this caused much shortage a few months ahead and resulted in prices running away. It was the belief of most importers that these conditions will always remain so long as consumers adhere to the policy of not buying when goods are declining, or are cheap, and coming in whenever values begin to rise.

The first quarter of the year was a period of rising prices at Calcutta. A fair view of the situation may be gained from the following tabulation showing prices on T. N., at Calcutta, London, and New York:—

T. N. Prices—First Quarter

Date.	New York.	Calcutta.	London.
Jan. 1.....	$0.64	$0.55¼	325s.
Jan. 15.....	.65	.58½	320s.
Feb. 1.....	.66	.60	325s.
Feb. 15.....	.70	.62	342s. 6d.
Mar. 1.....	.74	.61	340s.
Mar. 15.....	.77	.61	390s.

During this quarter a great deal of trouble was experienced in getting shipments started from Calcutta. Labor troubles of one kind and another affected not only loading of ships but rail transportation from the factories. There were also a number of severe losses because of fires on ships afloat to New York. The instances of the Romeo and the Poleric come to mind in this connection.

All these developments were factors in forcing the market up and bringing about the high point of 82c. per pound for spot T. N., that price being paid in April.

In the main, the second quarter of the year continued the upward movement started in January. All markets displayed strong undertones and there were those who believed that the rise would continue almost throughout the year. This proved to be a false premise because the market at Calcutta dropped 27c. between the end of June and the first of September.

The following tabulation presents T. N. prices covering the second quarter of the year. The dates are approximate, being correct within one or two days. Owing to the fact that the data are drawn from the Reporter's reports, the Reporter nearest to the first or fifteenth of each month was used:—

T. N. Prices—Second Quarter

Date.	New York.	Calcutta.	London.
April 1.....	$0.82	$0.70	...
April 15.....	.82	.68¾	385s.
May 1.....	.77	.65½	380s.
May 15.....	.72	.68	370s.
June 1.....	.80	.76½	375s.
June 15.....	.78	.75½	380s.

Shortly after June 30 buyers stopped buying. Industrial depression hit the largest individual class of shellac consumers—the talking machine record makers. Two of them went into the hands of receivers. The largest of them privately admitted that sales were the poorest over a period of several years. This condition reduced buying in a large measure at Calcutta and to smallest jobbing limits on spot. The depression also brought out bankrupt stocks of shellac. Record makers in two instances at least offered large stocks of shellac through the largest importer in this country. Naturally, under such conditions, prices declined in all markets.

The third quarter of the year was the period in which the major decline occurred. The price movements may be appreciated from the following table:—

T. N. Prices—Third Quarter

Date.	New York.	Calcutta.	London.
July 1.....	$0.78	$0.71¾	355s.
July 15.....	.77	.69	365s.
Aug. 1.....	.74	.65	345s.
Aug. 15.....	.69	.58½	325s.
Sept. 1.....	.61	.56	315s.
Sept. 15.....	.61	.53½	300s.

During this period of poor demand on spot importers generally warned the consuming trade against a continuation of its policy of inactivity as regarded covering future needs. They declared that the importers would not import on their own account and that unless the trade opened up and bought the last quarter of the year would find the spot market short of supplies.

This last assertion proved to be fact during the last quarter of the year. In the month of December a situation of low stocks, nominal prices and inability of importers to sell anything but futures two to three months ahead brought the spot market into one of the strongest positions it ever occupied. Never within the memory of some of the oldest members of the shellac trade was there such a shortage of spot goods. To add to the scarcity of supplies caused by the small shellac arrivals, one bleacher was out of operation by a fire that made it necessary for his customers to be supplied by other bleachers. Further, there were unheard of delays in unloading of ships after they arrived in this country. Another factor that did not contribute anything to the relief of the consuming trade was another dock strike at Calcutta. This held up ships and caused from fifteen days to a month delay in needed shipments.

Naturally, under these conditions, prices could do nothing but advance. The largest shellac importer in this country entered the primary market, the London market, Hamburg, French cities and New York, buying everything offered and calling for more. There seemed to be no satisfying this importer, and his activities in this respect continued long after the end of the year.

The price record for the final quarter of the year is as follows:

T. N. Prices—Fourth Quarter

Date.	New York.	Calcutta.	London.
Oct. 1.....	$0.58	$0.50	290s.
Oct. 15.....	.58	.54	290s.
Nov. 1.....	.67	.62	355s.
Nov. 15.....	.70	.60	340s.
Dec. 1.....	.72	.63	345s.
Dec. 15.....	.72	.67	350s.
Dec. 31.....	.78	.72	375s.

The close of the year found the market in very firm position. Price tendency was distinctly upward, as demand showed no falling off and only future deliveries were obtainable. Spot values were purely nominal.

Waxes

Waxes went through a fairly active year that improved considerably toward the end of the twelvemonth. In fact, the trend in this market was upward most of the time and primary market conditions assisted those on spot in bringing about the strong close.

African beeswax opened the year at 13½c. per pound, a figure that proved to be the low for the year. During the first three months, prices moved up to 17c. per pound with buying good and the Lisbon market reporting fair supplies. The sharp pinch upward came in the second quarter when a high of 26c. per pound was reached following the exhaustion of Lisbon stocks. The third quarter saw a reaction in prices, quotations on spot dropping to a low of 21c. per pound, only to rebound to 24c. per pound during the last quarter. The future was considered to be bearish, as new crop was pending.

Carnauba wax was subject to two major factors during the year. One of them was the developments in milreis exchange and the other was a short crop. Early in the year, demand here was not so good and prices on North Country No. 3 stood around 12c. per pound. During the next two months prices moved up to 16c. per pound, where they held until August, when a further rise put prices 17c. per pound.

It was in the third quarter of the year that the market became disturbed about the new crop situation. Cables received by importers declared that the crop would be small and that exporters intended to get full prices before they shipped a pound. The effect of this on spot was rather slow to materialize. In September, quotations did hit 20c. per pound, but they subsequently fell off to a low of 17c. per pound, closing the year at 17½c. to 18c. per pound.

The declines in this market were not followed at all in Brazil. The revisions were forced by the fact that two outsiders in this market held fairly large stocks of the article and were sellers steadily throughout the period in which bullish news was the feature of primary market advices. As they sold, prices went down as they met almost any and all competition.

In the meantime, Brazil held firm, refused to ship anything save at its own prices, and awaited the inevitable time when the market would swing to them. The fact that no new crop was shipped out of Brazil resulted in only small landings from that country during December, at which time large quantities of new crop should have been arriving. The arrivals were all the fag end of the 1921 crop and it was not until well into February that the first of 1922 wax arrived.

At the close of the year, sellers were optimistic as to the future, feeling that because the price of wax was so far below prewar levels that there was room for improvement. The short crop gave promise of their expectations being realized and the chance for higher exchange on the milreis was an additional factor that made the future one of confidence, in the main.

Myrrh Trade of Aden

Imports of gum myrrh at Aden in 1922, totaling 25,952 hundredweight, were nearly 25 per cent. larger than in 1921, reports Consul Raymond Davis to the Bureau of Foreign and Domestic Commerce. Exports at 18,764 hundredweight were 12 per cent. more than in the previous year. Somaliland was the chief source of the imports in both years. Egypt ranked first in the expert field in 1922 and India second, a reversal of their 1921 positions. Specific figures of the trade of the past two years follow:—

Imports and Exports

Countries of origin or destination—	1921. Cwt.	1922. Cwt.
Imports:		
Somaliland	16,080	18,214
Italian East Africa	150	528
Arabian Gulf ports	4,250	6,240
Jibuti	240	265
Other	125	765
Total imports	20,845	25,952
Exports:		
Egypt	5,852	7,218
India	7,202	5,921
United Kingdom	356	621
United States	12	302
Other	3,329	4,702
Total exports	16,751	18,764

Business in gum myrrh is showing activity and large sales are being made by several of the leading exporters of Aden. So far the majority of these shipments has been going to French ports, whether or not France was the ultimate consumer.

Nauli Gum Contains Anethol

Analysis of a new resinous product from the Solomon Islands, known there as "Nauli Gum," has been made by the British Imperial Institute with a view of determining its commercial possibilities. This "gum" is derived from a large tree, identified by the Australian Institute of Science and Industry as the Java almond tree (Canarium commune. Linn.), closely related to the tree yielding manila elemi.

The results of the examination show that "Nauli gum" consists of an oleoresin which furnishes about 10 per cent. of volatile oil on steam distillation. This oil is quite unlike the turpentine oils of commerce, and the results indicate that it contains only a relatively small quantity of terpenes, but about 34 per cent. of anethol. The oil would, therefore, be of no value as a turpentine substitute, but it might be utilized as a substitute for anise oil or as a source of anethol.

The resin left after the removal of the volatile oil could be utilized for varnish making, but owing to its insolubility in caustic alkali it would be unsuitable for the production of resin soaps or resin size.

Gums, Shellac, Waxes: Record of Prices

Gums

Aloes, Curacao, Cases

On November 22, 1871, the price was 20@21c.; October 18, 1881, 13@15c.; 1891, 2½@5c.; 1901, 3¾@4¼c.; 1911, 7¼@7½c.; 1913, 8@8½c.; 1918, April, 11c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.08½	$0.08½	$0.07	$0.07
February	.08½	.08½	.07	.07
March	.08½	.08½	.07½	.07
April	.08	.08	.07½	.07½
May	.08	.08	.07	.06
June	.08	.08	.06	.06
July	.07½	.07½	.06	.06
August	.07½	.06½	.06	.06
September	.06½	.06	.06	.06
October	.07	.07	.06	.06
November	.07	.06½	.06	.06
December	.07	.06½	.06	.06
Year	.08½	.06	.07½	.06

Thirteen Years' Prices

	Per pound— H.	L.
1922	$0.07½	$0.06
1921	.08½	.06
1920	.10	.08½
1919	.10	.08
1918	.11	.08
1917	.09½	.08
1916	.14	.09
1915	.15	.11½
1914	.16	.08
1913	.11	.06½
1912	.11½	.07¾
1911	.08	.06½
1910	.08¾	.06¾

Arabic, Cleaned Amber, Sorts

On October 18, 1871, the price was 19@21c.; 1881, 10½@12½c.; 1891, 23@25c.; 1901, 13@26c.; 1911, 11½@11¾c.; 1913, 8½@9c.; 1917, October, 33c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.13	$0.11½	$0.10½	$0.10½
February	.11½	.11	.10½	.11½
March	.11	.10½	.10½	.10
April	.10	.10	.10½	.10
May	.11	.10	.12	.10½
June	.11	.10	.12½	.12
July	.10½	.10	.16	.14
August	.10	.10	.16	.15¾
September	.10	.09½	.15½	.15¼
October	.10	.10	.15½	.15¼
November	.10	.09¾	.15½	.15
December	.10½	.09¾	.15½	.15½
Year	.13	.09½	.16	.10

Asafœtida, Lump

On October 18, 1871, the price was 55c.; 1881, 13@14c.; 1891, 11@15c.; 1901, 20@30c.; 1911, 75c.@$1.25; 1913, 30c.; 1919, June, $6.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$2.50	$1.95	$0.33	$0.30
February	1.90	1.25	.30	.30
March	1.25	.70	.30	.30
April	.70	.40	.30	.30
May	.40	.40	.30	.30
June	.38	.38	.33	.30
July	.37	.35	.40	.40
August	.35	.33	.40	.35
September	.33	.33	.38	.30
October	.33	.30	.38	.35
November	.30	.30	.35	.35
December	.33	.30	.35	.32
Year	2.50	.30	.40	.30

Camphor, American, Refined

On October 18, 1871, the price was 69½@70c.; 1881, 24½@25c.; 1891, 43c.; 1901, 57@57½c.; 1911, 45@46c.; 1913, 42½c.; 1919, September, $3.30.

	Per pound, bulk, in barrels— 1921. H.	L.	1922. H.	L.
January	$1.00	$1.00	$0.92	$0.92
February	1.00	1.00	.96	.96
March	1.00	.90	.96	.96
April	.90	.80	.96	.96
May	.80	.80	.90	.90
June	.80	.80	.90	.90
July	.75	.75	.90	.90
August	.75	.75	.90	.90
September	.75	.75	.90	.90
October	.85	.75	.90	.90
November	.92	.85	.93	.90
December	.92	.92	.96	.96
Year	1.00	.75	.96	.90

Thirteen Years' Prices, Refined

	Per pound— H.	L.
1922	$0.96	$0.90
1921	1.00	.75
1920	3.30	1.00
1919	3.30	2.50
1918	1.34½	.76½
1917	.89½	.74½
1916	.86½	.42
1915	.44½	.41
1914	.59½	.41
1913	.44	.42
1912	.44	.44
1911	.49½	.42
1910	.45	.42

NOTE:—Owing to the American camphor refiners' inability to secure supplies of crude beyond that necessary to meet their government contracts, they withdrew all quotations in October, 1918, when the influenza epidemic forced the rise in Japanese refined camphor to $4 per pound.

Camphor, Japan, Refined, Slabs

On October 18, 1871, the price was 69½@70c.; 1881, 24½@25c.; 1891, 43c.; 1901, 57@57½c.; 1911, 45@46c.; 1913, 42½@46c.; 1919, October, $3.65.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.90	$0.80	$0.92	$0.90
February	.80	.75	.96	.91
March	.75	.67	.90	.88
April	.65	.64	.86	.80
May	.70	.65	.78	.76
June	.75	.70	.79	.78
July	.77	.74	.80	.79
August	.74	.70	.83	.82
September	.74	.70	.80	.83
October	.85	.70	.89	.86
November	.92	.85	.91	.84
December	.92	.92	.94	.94
Year	.92	.64	.94	.76

Myrrh

On October 18, 1871, the price was 42@46c.; 1881, 27@30c.; 1891, 16@40c.; 1901, 12@25c.; 1911, 13@18c.; 1913, 13@16c.; 1919, February, $1.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.60	$0.60	$0.40	$0.40
February	.55	.55	.40	.38
March	.55	.48	.38	.38
April	.50	.48	.38	.38
May	.45	.45	.50	.38
June	.45	.45	.50	.50
July	.45	.45	.50	.50
August	.40	.40	.47	.36
September	.40	.40	.50	.50
October	.40	.40	.50	.46
November	.40	.40	.46	.45
December	.40	.40	.55	.45
Year	.60	.40	.55	.36

Tragacanth, Aleppo

On October 18, 1871, the price was 60@82½c.; 1881, 40@75c.; 1891, 24@48c.; 1901, 60@65c.; 1911, 25@77c.; 1913, $1.25@1.30; 1920, March, $5.25.

	(Dollars per pound) 1921— Firsts. H.	L.	Seconds. H.	L.	1922— Firsts. H.	L.	Seconds. H.	L.
Jan.	4.00	3.90	3.25	3.00	2.65	2.60	2.30	2.30
Feb.	3.90	3.80	3.00	3.00	2.60	2.25	2.30	1.80
March.	3.75	3.75	3.00	3.00	2.25	2.20	1.80	1.80
April.	3.75	3.75	3.00	3.00	2.20	2.00	1.80	1.80
May	3.75	3.60	3.00	2.90	2.00	1.85	1.85	1.80
June	3.60	3.50	2.90	2.90	1.85	1.80	1.70	1.65
July	3.40	3.40	2.90	2.90	1.80	1.75	1.65	1.55
Aug.	3.40	3.40	2.90	2.90	1.75	1.75	1.55	1.55
Sept.	3.40	3.40	2.90	2.90	1.75	1.75	1.55	1.55
Oct.	3.40	2.95	2.90	2.50	1.75	1.75	1.55	1.55
Nov.	2.95	2.85	2.50	2.50	1.75	1.75	1.55	1.55
Dec.	2.85	2.85	2.50	2.50	1.75	1.75	1.55	1.55
Year	4.00	2.85	3.25	2.50	2.65	1.75	2.30	1.55

Waxes

Bees, African

On May 20, 1872, the price was 31@32c.; October 18, 1881, 23@24c.; 1891, 22@24c.; 1901, 33@35c.; 1911, 32@33c.; 1913, 34@35c.; 1918, November, 47c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.18	$0.16	$0.15	$0.13½
February	.18	.16	.15	.14½
March	.17	.17	.17	.14½
April	.17	.15	.19	.18
May	.17	.16	.20	.19
June	.17	.16	.26	.24½
July	.17	.14	.24	.23
August	.16	.14	.24	.23
September	.16	.16	.22	.21
October	.14½	.14	.21	.21
November	.14	.13½	.24	.23
December	.13½	.13½	.24	.24
Year	.18	.13½	.26	.13½

Bees, Refined

On May 20, 1872, the price was 60@65c.; October 18, 1881, 30@41c.; 1891, 40@45c.; 1901, 38@50c.; 1911, 34@38c.; 1913, 36@37c.; 1918, November, 50c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.27	$0.26	$0.22	$0.21
February	.24	.24	.22	.22
March	.24	.24	.24	.22
April	.25	.23	.24	.23
May	.23	.23	.25	.24
June	.23	.23	.30	.29
July	.23	.20	.30	.30
August	.24	.20	.30	.30
September	.24	.22½	.26	.26
October	.23	.21½	.26	.26
November	.21½	.21½	.28	.28
December	.21½	.21½	.28	.28
Year	.27	.21½	.30	.21

Candelilla

On January 23, 1911, the price was 36@37c.; October 18, 1911, 25@30c.; 1913, 22@24c.; 1918, June, 57c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.32	$0.32	$0.25	$0.25
February	.32	.32	.26	.25
March	.32	.32	.26	.26
April	.26	.26	.27	.26
May	.26	.26	.35	.27
June	.26	.26	.35	.33
July	.26	.25	Nominal	
August	.25	.25	.45	.45
September	.25	.24	.45	.35
October	.25	.24	.37	.35
November	.25	.25	.37	.35½
December	.25	.25	.35½	.35½
Year	.32	.24	.45	.25

Carnauba, N. C., No. 3

On January 8, 1872, the price was 14@16c.; October 18, 1891, 15@20c.; 1901, 12@13½c.; 1911, 37@38c.; 1913, 33@33½c.; 1918, June, 81c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.20	$0.18	$0.14½	$0.12
February	.20	.18	.16	.15½
March	.21	.21	.16	.16
April	.21	.18	.16	.16
May	.17½	.16½	.16½	.16
June	.16½	.14	.16½	.16½
July	.14	.13½	.16	.15
August	.15½	.13½	.17	.17
September	.15½	.15	.20	.20
October	.16	.14½	.18	.17
November	.15½	.13½	.17½	.17
December	.13½	.12	.18	.17½
Year	.20	.12	.20	.12

Japan

On January 12, 1881, the price was 15@16c.; October 18, 1881, 12½@13c.; 1891, 9@10c.; 1901, 7¼@7½c.; 1911, 8½@8¾c.; 1913, 9@9¼c.; 1918, September, 27½c.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.19	$0.19	$0.19	$0.18
February	.19	.19	.20	.18
March	.19	.19	.17¾	.17
April	.19	.18	.17	.17
May	.18½	.18	.17	.16¼
June	.17	.17	.17	.16
July	.16	.15	.17	.16½
August	.25	.15	.16	.15½
September	.25	.25	.15½	.15
October	.22	.22	.15	.14½
November	.23	.21	.15	.15
December	.21	.18	.15	.15
Year	.25	.15	.20	.14½

Shellac, T. N.

On October 18, 1871, the price was 31@42c.; 1881, 20@30c.; 1891, 21@23c.; 1901, 23@25c.; 1911, 14@14½c.; 1913, 21½@23c.; 1920, January, $1.60.

(In bags)

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.65	$0.55	$0.66	$0.64
February	.55	.50	.74½	.66
March	.47	.45	.82	.74
April	.50	.45	.82	.78
May	.70	.60	.77	.72
June	.70	.58	.80	.78
July	.52	.46	.78	.74
August	.46	.44	.72	.65
September	.57	.47	.61	.57
October	.65	.57	.67	.54
November	.67	.64	.72	.70
December	.67	.65	.76	.72
Year	.70	.44	.82	.54

Twenty-two Years' Prices

	Per pound— H.	L.
1922	$0.82	$0.54
1921	.70	.44
1920	1.60	.65
1919	1.50	.46
1918	.68	.57
1917	.60	.39
1916	.30	.20
1915	.21	.13¼
1914	.21	.14
1913	.22½	.16½
1912	.16½	.13½
1911	.18	.13½
1910	.19½	.14
1909	.20½	.14
1908	.29	.20
1907	.48	.26
1906	.50	.42
1905	.46	.42
1904	.52	.42
1903	.52¾	.26½
1902	.40	.24
1901	.30	.14
1900	.15	.14½

Shellac, D. C.

On August 22, 1877, the price was 26c.; 1881, 38@39c.; 1891, 30@31c.; 1901, 33@34c.; 1911, 22@23c.; 1913, 27@28c.; 1920, July, $1.75.

	Per pound— 1921. H.	L.	1922. H.	L.
January	Nominal		$0.80	$0.80
February	$1.00	$0.90	.84	.80
March	.80	.75	1.00	.84
April	.78	.75	1.00	1.00
May	.85	.78	1.00	.91
June	.82	.82	.99	.92
July	.78	.72	.90	.99
August	.72	.62	1.03	.99
September	.78	.72	1.03	1.00
October	.78	.78	1.00	.98
November	.80	.80	.98	.97
December	.80	.80	1.02	.97
Year	1.00	.62	1.03	.80

Shellac, V. S. O.

On June 15, 1881, the price was 37@40c.; October 18, 1881, 34@35c.; 1891, 26@27c.; 1901, 23@30c.; 1911, 21@22c.; 1913, 26@27c.; 1920, July, $1.75.

	Per pound— 1921. H.	L.	1922. H.	L.
January	Nominal		$0.80	$0.80
February	$1.00	$0.90	.83	.80
March	.80	.75	1.00	1.00
April	.78	.75	1.00	.91
May	.85	.78	1.00	.91
June	.82	.82	1.00	1.00
July	.78	.72	1.03	1.00
August	.72	.62	1.03	.99
September	.78	.72	.99	.97
October	.78	.78	.98	.98
November	.80	.80	Nominal	
December	.80	.80	1.03	.80
Year	1.00	.62		

Shellac, Bleached, Commercial

On August 22, 1877, the price was 35c.; October 18, 1881, 35@36c.; 1891, 24@30c.; 1901, 22@24c.; 1911, 15@20c.; 1913, 20½@25¼c.; 1920, January, $1.45@1.75.

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.65	$0.55	$0.67	$0.65
February	.55	.50	.75	.65
March	.45	.45	.75	.75
April	.50	.45	.75	.75
May	.68	.55	.78	.73
June	.68	.57	.81	.80
July	.57	.46	.81	.78
August	.47	.44	.78	.71
September	.56	.48	.64	.63
October	.65	.56	.64	.58
November	.68	.65	.71	.71
December	.67	.65	.71	.71
Year	.68	.44	.81	.63

Shellac, Bleached, Bone Dry

	Per pound— 1921. H.	L.	1922. H.	L.
January	$0.80	$0.70	$0.77	$0.75
February	.67	.60	.84	.77
March	.55	.55	.94	.86
April	.60	.53	.94	.94
May	.80	.66	.92	.88
June	.80	.70	.92	.90
July	.67	.59	.92	.86
August	.57	.55	.82	.87
September	.67	.58	.75	.74
October	.77	.67	.79	.72
November	.77	.76	.86	.86
December	.78	.75	.87	.86
Year	.80	.53	.94	.72

Frankincense Output of Red Sea District

The production of gum frankincense in the Red Sea district during the official year 1921-1922 was approximately identical with that of the preceding year, American Consul Cecil M. P. Cross reports from Aden, Arabia, to the Bureau of Foreign and Domestic Commerce. This is historically and commercially one of the most important products of the district, and could easily amount to much more if the semi-nomad inhabitants were ambitious, Mr. Cross adds.

In the figures for the past year, when 65,500 hundredweight was exported from Aden, the United States again appears as a direct purchaser for the first time since the pre-war days. The quantity is small, but is twice what it was in 1913-14, and a considerable part of the shipments to France is also believed to find its ultimate destination in America. Germany appears as a purchaser for the first time since the outbreak of the war, and the amount bought by Austria shows an increase of nearly 100 per cent. The extent of the business depression and crippled purchasing power of Abyssinia is shown by the decrease in the amount of the gum purchased. Abyssiania is normally one of the largest consumers of gum frankincense in connection with religious ceremonies.

The gum is not cultivated, it seems, but is entirely the product of a rather large tree growing in certain parts of Somaliland, Abyssinia and Arabia. It exudes as a sap during the dry season and drys on the branches, whence it falls to the ground and is gathered up by the inhabitants of the regions, who sell it to petty traders, who in turn bring it to Aden for disposal to larger dealers; by whom it is sorted and exported. The crop varies much more, according to economic than meteorological conditions, Consul Cross says, as it is rather a question of inducing the people to collect the gum than of the amount available. If present prices of 28 rupees per unit Bahar of 336 pounds are maintained, it is reported very probable that the coming year will see a material increase in the amount of gum produced.

North African Phosphate Industry

The Commercial Counsellor at Paris (J. R. Cahill) reports to the following effect on the phosphate companies of North Africa:—

In 1913 the world production of phosphates amounted to 7,000,000 tons, of which North Africa contributed 2,486,000 tons, as follows:—

	Tons.
Gafsa (founded in 1897)	1,361,000
Dyr (founded in 1899)	170,000
Tunisiens (founded in 1907)	362,000
M'Zaita (founded in 1910)	93,000
Constantine (founded in 1912)	200,000

The balance was produced by various small companies, but it may be mentioned that the output of the Rebiba-Maknassy-Gouraya group, in which the Compagnie des Phosphates Tunisiens was interested, amounted to 120,000 tons.

In 1913 Europe consumed 4,413,000 tons of phosphates, of which 2,345,000 tons were supplied by North Africa. 1,618,000 tons by America and 450,000 tons by France and Belgium.

The situation of the North African phosphate companies was completely transformed by the war, notably as a result of the closing of the Central European market, the difficulties in securing a sufficient supply of labor on account of mobilization and the reduced consumption in neutral countries. The companies also suffered from the submarine campaign. The scarcity and cost of freight was such that the output of the Gafsa company in 1917, although in 1916 it had made a great effort to increase production, fell to a quarter of the pre-war figures. It was consequently obliged to reduce production in order to avoid an accumulation of stocks.

After the armistice the companies still suffered from the scarcity of freights and the difficulty of recruiting labor. Moreover the French Government regulated the trade in phosphates in order to assure sufficient supplies for French agriculture. In 1920, as a consequence of this situation, North Africa only produced 1,970,000 tons of phosphates, as against an American production of over 4,000,000 tons. At this date there was a considerable rise in the price of phosphates, which were sold at more than 100 francs a ton instead of 30 francs a ton in 1913. This higher price was only applicable to sales to foreign countries, as France enjoyed a special rate. The increase was of little advantage to the companies on account of higher manufacturing costs and it was only in the second half of 1921, when the restrictions on trade in phosphates were removed, that the companies could resume their normal activity. At the same time there was an improvement in the supply of labor. The economic crisis, however, hindered the revival and the diminished consumption obliged the companies to accumulate stocks and to reduce their output to an extent which in certain cases reached 50 per cent.

Before the 1922 harvest there was a great improvement in the situation. The price of superphosphates fell from 30 francs the metric cwt., rate ruling in 1920, to 15 francs, and there was at the same time an increased demand from agriculture. The results of this revival are shown in the balance sheets of the companies.

Some fears have been expressed that the recovery of the Alsatian potash field and the possibility of an increase in the production of nitrogenous fertilizers may have an unfavorable influence on the North African phosphate companies. The competition of the phosphate field in Morocco must also not be neglected, although the difficulties of transport and the want of ports for shipment seem likely to prevent production on a large scale within four or five years. It is expected that in 1924 about 300,000 tons of phosphates will be despatched from Morocco and 1,000,000 in 1928, whereas Algeria and Tunisia should produce from 3,500,000 to 4,000,000 tons towards the same date. On the whole, the future of the North African companies may be regarded as promising.

Synthetic Shellac

A new synthetic shellac has been introduced in the English market under the name of "Synlac." The properties of this product are said to be very similar to those of natural shellac. The synthetic shellac dissolves completely in denatured alcohol and when used to make lacquers and varnishes it is said to give coatings which possess just as high a lustre as the best grades of orange shellac.

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Fertilizer Materials
Pharmaceuticals

Camphor Refiners
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Fertilizer Materials: Market Review

Consumption of fertilizers was not up to normal in the United States during the year 1922; at the same time it was fully up to expectations and it was by no means a bad year for the fertilizer industry. The South was not in position to buy as much fertilizer as it should have used on cotton fields, and in some sections of the North consumption was much smaller than it should have been to insure good crops. But it had not been expected that the farmers would be in position to buy what they really needed, and, considering the financial condition of the farming community, there was a demand for a fairly large amount of fertilizer material.

It was a year during which some branches of the fertilizer industry made decided progress in the direction of a return to normal conditions. In many lines the end of the war threw upon the fertilizer market large stocks of materials which had been originally intended for munition plant consumption, and even at the close of the year these accumulated surpluses had not been entirely disposed of. During the previous year, however, the accumulated stock of sulphate of ammonia had been got rid of by price cutting that resulted in heavy foreign buying; and, as it turned out, it would have been better if these stocks had not been cleaned up so hastily.

As soon as the war was over Germany was ready to begin shipping potashes to this country, but was not in position to begin to import American phosphates freely. It needed them quite as much as this country needed potash, but the improvement in the export business of American phosphate producers has been something of very slow growth since it was ruined by the war.

The railroad strike in this country, together with the coal strike, most seriously affected the production of sulphate of ammonia, and held down what might have been a very active export business in this material. It was particularly unfortunate that this should have occurred just when it did, for production of this material in Great Britain has been greatly curtailed, and non-producing countries were turning more and more to this country for supplies of a material that the United States imported in large quantities before the war. Just at a time when expansion of an import export business was possible, poor rail service and scarcity of coal held down production until distributors were compelled to turn down export business in order to properly serve their domestic customers.

Mixers were carrying good sized stocks of some materials at the beginning of the year, and the early demand was not good. The initial prices of mixed fertilizers proved too high, but price cutting soon started, and demand began to improve. The price cutting continued throughout the spring season, and the result was that the late demand was much better than the early call, and the season turned out better than it promised at the start.

Nitrogenous Materials Short

The interest of the market was largely centered in nitrogenous materials, for there was an abundant supply of both phosphates and potashes. There were large stocks of foreign potashes in store in this country at the beginning of the year, and the import movement was heavy enough to keep supply better than demand all year. Stocks of acid phosphate were so large that it was necessary to curtail production greatly from the beginning of the year to the end. It was only in ammoniates that there was anything like a shortage. In all sorts of nitrogenous materials it was a year of advancing prices.

There was an unusually good demand from feeders for blood, tankage and fish scrap, and the result of this was that these materials advanced to a level which made them too expensive to be extensively used in fertilizer mixtures. Feeders, especially chicken feeders, can afford to pay a great deal more for materials of this class than can the fertilizer industry, and it looks as if they would come to be less and less used as fertilizer materials. Packers are taking greater care to keep their material clean of hair and other impurities and in condition to offer for feeding purposes, and fish scrap is being used as a feed in sections of the country where it was never used before.

There was a decreasing use of animal ammoniates during the year and an increasing use of air-derived nitrogen as a substitute for organic ammoniates. Naturally the industry prefers to depend upon materials which can be supplied regularly and in bulk and whose prices are not determined by the demand coming from some source other than fertilizer consumption.

The most radical change in the situation in ammoniates over that which had existed the year before was found in the sulphate of ammonia market. During 1921 this market felt the weight of the surplus stocks carried over by the wartime period. American consumers refused to take advantage of the fact that the price was low and the result was that a very large amount of this material was allowed to go abroad at a very low price. The first-hands market cleaned itself up during 1921 by selling to Japan, and there was no weight of stocks on the market at the beginning of 1922. The price began to advance early in the year and it continued to work higher.

During the previous year there had been more on hand than the market could take care of, but at no time during 1922 was the supply better than the demand. The coal strike did not affect producers seriously until the railroad strike interfered with deliveries, but when this occurred production was greatly curtailed. During the last quarter of the year when there was a demand from many countries for American sulphate it was necessary for the leading distributors to refuse to accept export orders. They decided that the demands of American consumers must be taken care of first, and it was difficult to keep up with deliveries on domestic orders.

Nitrate of Soda Got Benefit

The fact that there was a firm market for sulphate of ammonia made it possible for importers of nitrate of soda to hold that market very steady during the entire year, in spite of the fact that there was an accumulation of stocks in the producing country, that might have been expected to have weakened the market. There was a decided increase in imports of nitrate of soda over those of the previous year, but the showing for 1921 was not a normal one, as the cheapness of sulphate of ammonia during that year greatly decreased the demand for nitrate of soda. The movement from Chile to this country during 1922 amounted to 578,000 tons, as compared with 302,000 tons during the previous year.

The production end of the nitrate market is controlled by a monopoly that has the active support of the Chilean Government. This trust fixes first-hands prices and announces them for a whole season. When it made its price announcement early in the year and provided for a gradually increasing price scale, it was quite generally predicted by consumers and others that it would not be able to maintain its prices during the season. It was able to do so fairly well, however, in spite of the fact that during the year the United States Government sold off some of its surplus stocks and in spite of the fact that consumers undoubtedly got along with just as little of this material as they could possibly do with.

There was a decrease in nitrate stocks in this country during the year; for, according to the figures of producers, while the exports from Chile to this country were 578,000 tons, deliveries in the United States amounted to 732,000 tons, which compared with deliveries of 238,000 tons for the previous year. It was estimated that the world's consumption of nitrate for the year was 1,841,000 tons, as compared with 1,313,000 for 1921, and at the end of the year stocks in Chile amounted to 1,231,000 tons, as compared with 1,441,000 tons at the end of the previous year.

Under normal conditions there should be an increase in the domestic production of sulphate of ammonia every year. This is one of the industries which made most rapid forward strides during the period of the war. In 1916 the producing capacity of the United States was about 183,000 tons a year, and by 1921 this had been increased to 550,000 tons. There were not 550,000 tons produced in 1922, however; because of the coal and railroad strikes about 100,000 tons less was produced than might have been produced, and the total output for the year was about 485,000 tons.

There has been a decided improvement in the demand for this material, and its use in this country is increasing all the time. One reason for this is the fact that increased production has cut down the price. In 1916 the average bulk price, f.o.b. factory, was $76.56 a ton, and the advance which occurred during 1922, did not carry this price over $66, although there was a great advance over the 1921 price, which was figured to have averaged $48.10 per ton. The only way in which the domestic consumer was affected by the fact that there was not capacity production during the year was in the stiffening of the price, for there was no shortage of sulphate to meet the domestic demand, and the principal effect of the restrictions imposed by the strikes was to hold down the amount of export business that might have been.

In spite of the fact that there had been no sulphate of ammonia brought into this country, except some from Canada for trans-shipment, since the war, and although there was no pressing request for protection made by producers, this material was taken off the free list and a duty of $5 a ton placed upon it by the new tariff law. This duty, however, had little effect on the market one way or another. This country has become an exporter of the material, and its importation would only be considered if some combination of circumstances which could scarcely be conceived should shut off domestic production.

There was not a large amount of packing house ammoniates imported during the year, in spite of the advancing prices of blood and tankage. There was, however, a fair amount brought in from South America, a large per cent. of which went to the Pacific Coast, where the prices were higher than in the East. Of the total production of domestic packing houses more went to feeders and less for fertilizer purposes than ever before.

Potash Imports Large

Imports of foreign potash were fairly large during the year, but not nearly what they were in the period before the war when Germany was dumping all that it possibly could in this country. The average domestic consumption is estimated at about 250,000 tons, but in 1920 there were 279,000 tons brought in and 274,000 tons in 1911. In 1914 imports were 207,000 tons, and two years later they were 7,885 tons. This country got used to doing with less potash during the war, and when 223,000 tons were imported in 1920 it caused an over-supply that was still felt in 1922, and stocks were large at the beginning of the year.

Imports were undoubtedly greater than they would have been had it not been for the fact that domestic producers made a very determined effort to have a duty on potash salts incorporated in the new tariff law. For a time it seemed that this effort might meet with success, and for that reason imports were stimulated to an extent, and there never was a time during the year when there was much more than enough potash in this country to supply all the demands of consumers. In the end the tariff bill became a law with potash still on the free list, and therefore there was no profit in it for those who had speculated upon a duty.

The low cost of production in Germany, due to the declining value of the mark, placed German producers in position to control prices. The prices named were not much different from those prevailing before the war, but because of the fact that German producers paid wages in marks and received their money in dollars profits were undoubtedly greater than before the war, as far as German producers were concerned. The French producers met the German prices, and so did the California producers, who did not quit business because of the failure to secure protection, but increased their production during the last quarter of the year. The French succeeded in capturing a very large percentage of the American business, although the Germans claimed that to do so they were forced to do business at a loss.

German importers did not give out their figures, but the French syndicate announced that it brought in 71,480 tons of K_2O during the year, and estimates of total imports were around 150,000 tons of pure potash. The plan under which the California producers operated—they were the only domestic producers during the year—was to meet foreign potash prices as made in the different markets which enabled them to do business in the West where freight rates on imported from the coast were high. There were large stocks of this material on hand at the end of the year.

The acid phosphate market was in very bad shape at the beginning of the year, and during the greater part of the period it was so demoralized that the price was whatever the buyer would pay, and the quotations named by producers meant practically nothing. It was a market for distressed stocks, and sales were reported to have been made as low as $7 per ton for 16 per cent. material, and a large part of the business of the year was booked at about $7.50 a ton. This price cutting was accompanied by drastic curtailment of production, and in the end the market had to stiffen.

During the last quarter of the year producers discontinued their slashing of prices, and the market showed decided improvement. It was in better shape at the end of the year than at any time since the war, and stocks in first hands were much smaller than they were at the beginning of the year. It was a hard year in this business, but the market had to be cleaned up, and cleaned up at a time when there was practically no export demand; and the progress made in reducing stocks was such as to make a long stride toward a return to normal, or as near normal as can be with a lack of export business.

There was an advance of $1 a unit in the price of both blood and tankage in the New York market during the year. The reason for this advance was largely the good demand for feeding purposes. There were times during the year when the market was slow, but producers held quite firmly to their asking prices, and in the end usually got what they were asking. There was a weakness during the spring, which was natural at that time in the year, but prices did not go as low as during the previous year at any time.

These materials are considered very desirable in some classes of mixtures, but they sold at such high prices during most of the year that fertilizer interests could not be heavy buyers, as it is not possible for them to pay as high as feeders are willing to go. This class of materials seems destined to grow less and less important as fertilizers. Producers are devoting more attention to the character of the products with the idea of supplying a material that will suit the demand of the hog and chicken feeders, and there will be a decrease instead of increase in supplies in the future, so that it pays mixers to consider satisfactory substitutes for animal ammoniates.

Early in the summer there were exports of both blood and tankage from South America to this country, but shipments were not large, and later in the year prices asked by South American producers were so high that little business was done.

At the prices paid there was good money for the packing houses in this end of their by-product business, and stocks in first hands at the end of the year were small, as consumption had been fully up to production during the year.

Fish Scrap

There was a determined effort made to increase production of scrap during 1922, there being more steamers engaged in the business than ever before. There were fifty-three steamers engaged in the business in lower Chesapeake waters, a considerable increase over the fleet of the season before. The cost of labor had returned to a normal basis, and there was a chance for a very prosperous season providing the fish could be landed. So good was the demand early in the season that heavy sales were made in advance of the fish being caught, and during a large part of the season the fish factories were behind in their deliveries.

In spite of the early prospects the season did not turn out to be a particularly good one, as the catch fell much below expectations. The result was a steadily advancing market. Early in the season dried scrap sold as low as $3.25 and 10 cents per unit, but this price was named at a time when producers still hoped for a very big season. Before the end of June the price had advanced to $3.60 and 10 cents per unit, and late in the year it went as high as $4.85 and 10 cents per unit.

There was an increase in the demand for feeding purposes and the percentage of the total yield that went for fertilizer purposes was smaller than usual. At no time during the year were stocks on hand large enough to be a weight on the market, and when the season closed the fish factories had practically nothing on hand. Prices were high enough to make the year a good one in spite of the fact that the catch did not turn out to be nearly as good as was expected. Had production been a great deal heavier it would have been easy to have sold the material at a good price level, as the demand was better than the supply.

Nitrate of Soda

In common with other nitrogenous fertilizer materials, nitrate of soda advanced steadily in price during the year. The total advance from the low of January to the high of December was 35 cents a 100 pounds, or $7 a ton. In spite of the fact that the United States Government sold some of its surplus stock during the year, and that from time to time there was resale material offering slightly under importers' prices, it was a steady market during the whole period and importers' prices were, on the whole, very well sustained.

Production and distribution of this material is controlled by the Chilean Nitrate Association, a combination of practically all the producers that has the active support of the Chilean Government, and importers' prices in this country are based upon the prices established in Chile by this trust.

The beginning of the year found nitrate producers in very bad shape. The industry had not yet recovered from the slump that followed the war. Stocks in the producing country and in Europe were large, and the entire industry heavily in debt to London bankers. So great was the necessities of the industry that many predicted that during the year an effort would be made to turn material into cash by cutting the price. Nothing of the kind occurred, however. The market held steady during the spring, and it was possible to advance the price

steadily during the season of heavy consumption. There was the usual decline at the end of the season, but the association announced its quotations for the rest of the year in May, and held to them very firmly.

The first hand prices as announced in May were as follows, the quotations being for 100 kilograms (2.17 Spanish quintals):—July 1, 18s. 6d.; July 16, 18s. 9d.; August 1, 19s.; August 16, 19s. 3d.; September 1, 19s. 6d.; September 16, 19s. 6d.; October 1, £1; October 16, £1 2d.; November 1, £1 4d.; November 16, £1 6d.; December 1 to April 13, 1923, £1 8d.

It will be seen from these quotations that the producers' trust planned a steadily advancing market, and that is what it was able to secure. There is no doubt but that the position of the producers was materially improved during the year. In the first place it was able to restrict production, in spite of the pressing necessity of producers to raise money. The production of Chile for the year was placed at 1,035,000 tons, as compared with 1,294,000 tons for 1921. There was also a splendid increase in exports to the United States, which amounted to 578,000 tons, as compared with 302,000 tons for the previous year. However, it was not possible to send as much to Europe, owing to the large stocks held there, and exports to Europe, including those to Egypt, were only 557,000 tons, as compared with 715,000 for the previous year. Exports to other countries amounted to 157 000 tons, as compared with 80,000 for 1921, and at the end of the year stocks in the producing country amounted to 1,231,000 tons, as compared with 1,441,000 a year before.

While there was a decrease in exports from Chile to Europe and Egypt, there was a decided increase in consumption in those countries during the year, for deliveries amounted to 1,000,500 tons, while for the preceeding year they were only 635,000 tons. The fact that this country drew on its reserve supply made deliveries in the United States larger than the exports from Chile to this country. Deliveries in the United States for the year were placed at 732,000 tons, as against only 238,000 tons in 1921. Deliveries in countries other than the United States, Europe and Egypt amounted to 116,000 tons, as compared with 78,000 tons for 1921, and the world's consumption for the year was placed at 1,841,000 tons, which was an increase of 528,000 tons over the consumption for 1921.

While there was a large increase in consumption in this country during the year, the figures given are somewhat deceptive, owing to the fact that consumption during the previous year had been so much below normal. During 1921 the price of nitrate was so high, compared with the price of sulphate of ammonia, that it was used as little as possible by American consumers in the fertilizer industry. It must be remembered, moreover, that nitrate of soda is an important raw material in the manufacture of powder, and American ammunition makers consumed a great deal more in 1922 than they did in 1921. When the United States Governent offered nitrate for sale at auction, and a very large part of what was disposed of went to powder makers. A large part of the remainder was bought by Importrs and resold at importers' prices, so that the government sales during the year had but little effect upon the market.

There was no more material brought into this country during the year than the demands of consumption called for, and at certain times during the period stocks in importers' hands in some sections were very small. Stocks in importers' hands at the end of the year were not large, but the United States Government still had on hand stocks of considerable size.

In spite of the fact that it had been announced that there would be a steady advance in price, buying during the year was largely hand-to-mouth in its character, and consumers showed no inclination to pile up stocks. During a large part of the year importers asked a margin of $5 a ton on much of their forward business, and naturally this had the effect of holding it in check.

Advancing freight rates and higher sterling exchange operated in favor of higher prices in this country, and importers were inclined to claim that their margin of profit was not large.

Sulphate of Ammonia

There was a wonderful change in conditions in this market during 1922 from those which prevailed during the previous year. The year 1921 was a clean-up period in this market. The beginning of that year found this country still loaded up with a very large accumulation that had been left over since the war, and producers decided to get rid of it. When American consumers did not take it, the price was cut until double bag material was offered for export at $40 a ton. The price cutting cleaned the market, Japan being the heavy buyer, and there were no burdensome stocks on hand at the beginning of 1922. By the beginning of the year the price had rallied from the low point of the previous year and the market was on a firm basis and headed upwards.

Sulphate of ammonia is produced in this country by the by-product coke oven process, and for this reason its production does not depend upon supply and demand, but is controlled by the activities of industries which can pay no attention to the demand for this particular material. It has been claimed as an argment against its production by the synthetic process that the abnormal war demand compelled overexpansion of this country's capacity to produce this material and that a large exportable surplus is always assured. The market of 1921 was held up as an argument by those who opposed the use of the Muscle Shoals plant to produce this material, and it was claimed that there is a producing capacity in this country of 550,000 tons a year of by-product material, against a consumption of 285,000 tons. The futility of such figures, however, was proved by the market of 1922.

It was not possible to approach capacity production, and capacity production of a by-product material is something that can never be expected. There was plenty of sulphate of ammonia produced to supply the demands of domestic consumers, but it would have been possible to have found a market for much more American sulphate than was marketed during the year, and a result of curtailed production and increased consumption was a steady advance in the price. During the first month of the year double bag material f.a.s New York sold as low as $2.55 per 100 pounds, and before the end of the year the price had advanced to $3.65 per 100 pounds, an advance within the period of $22 a ton. This advance made the market for nitrate of soda firmer, and was reflected to some extent in the prices of all ammoniates.

The effect of the coal strike was not greatly felt by the producing industries until the railroad strike began to interfere with deliveries of coal, but during the latter half of the year there was an enforced curtailment of production that was felt to a very considerable extent, although it is very doubtful if there would have been more produced than was wanted under the most favorable conditions. It was almost impossible to buy for export during a large part of the year, and it would have been possible to have sold a very large amount to other countries at a fair price. Had it not been for the advance in the price, domestic consumption also would have been larger.

It was claimed that during the previous year material had been sold below the cost of production, but it could not be claimed that this was the case during 1922. There has been a disposition on the part of consumers in this and other countries to use more of this material and less of nitrate of soda, and the small deliveries of the latter material in the United States during 1921 was in part due to the fact that cheap sulphate of ammonia was available. It is claimed by marketers of sulphate of ammonia that this material at $2.50 per 100 pounds is equivalent to nitrate of soda at $1.80 per 100 pounds, basing the price upon the ammonia content, and that at $3.50 per 100 pounds sulphate is equivalent to nitrate of soda at $2.52 per 100 pounds. Assuming that these figures are approximately correct, it will be seen how the advancing price of sulphate of ammonia brought back to about normal the difference in price between this material and nitrate of soda, without any price reduction in the latter material.

The average wholesale price of sulphate of ammonia f.o.b. factory for 1922 was about $65 a ton, and the average price for the previous year was placed at $48.10 a ton. In 1916 the average price for the year figured out $76.56 a ton.

There were practically no imports of this material during the year; what little arrived in this country from other countries came here only for reshipment. There is a shortage in this material all over the world, and production in Great Britain has been curtailed to a greater extent than has production in this country. The production of the world for 1922 was not large enough to meet the demands of the world's consumers, and non-producing countries, which formerly bought in England, were trying to get material here. Under these conditions it was not to be expected that the action of Congress in placing a duty of $5 a ton on the material should have had any effect upon the market.

Phosphates

The beginning of the year found the market for both acid phosphate and phosphate rock in a very badly demoralized condition. It is possible for this country to produce a great deal more material of this sort than required by the demands of domestic consumers, and for the market to be in a normal condition it is necessary for there to be a good export demand. A large part of Europe was in desperate need of this class of fertilizer during the year, but, unfortunately, it was not possible for the countries which needed phosphates most to buy more than small amounts. The end of the war found this industry in very bad shape, and circumstances were such as to mean a very slow recovery.

Stocks of acid phosphate in producers' hands at the beginning of the year were so large that it crippled the industry to carry them. There was practically no export demand, and domestic takings were far from satisfactory. In the face of these conditions the producers made an effort to hold prices up, not seeing fit to follow the example set by the producers of sulphate of ammonia when they cut prices all to pieces in 1921 and cleaned up that market. The prices named by producers during most of the year meant nothing at all, for there was no possibility of anyone paying them, and distressed stocks coming on the market caused all sorts of price-cutting. The price was finally forced down to a level at which it was possible to move goods.

Producers sold freely at $7.50 a ton for 16 per cent. material, while nominally they were asking $3 a ton more than this. It was said that sales were made at $7 a ton, and it was found that it was possible to sell material at $7 to $7.50 a ton that would not move at $10.50 a ton. The market remained at the low level for a considerable period, during which a great deal of cleaning up was going on. It finally began to appear that stocks which had to be moved regardless of the price were pretty well out of the way, and during the last few months of the year there was a decided improvement in the tone of the market. Producers got together and established a price of 16 per cent. material at $9.50 for run of pile and $10 a ton for milled and screened, and when the year ended the market had steadied itself at this level.

It was a hard year for the acid phosphate producers to go through, but it was a period during which much was accomplished in the matter of reducing stocks and placing plants in a position to be operated at a profit. Production was radically curtailed during the entire period, and there will have to be a curtailed production until there is again a normal export demand. The industry has pretty well adapted itself to existing conditions, however, and the end of the year found it in better shape than at any time since the war.

It was necessary for phosphate rock miners to hold down production during the entire year in a most drastic manner. Although labor was cheap and plentiful, it is estimated that production was not more than 25 per cent. of what it might have been had there been a market for the rock. Even with this great curtailment, however, it was a very weak market; and, although producers acted together in seeking export business and held export prices fairly steady, there was so much distressed rock coming on the market that it was altogether a buyers' market, and domestic consumers had a chance to pick up rock at practically what they were willing to pay.

There was as good an export demand as could be expected with conditions in Europe as they were, although North African rock came more actively into competition with American in the European markets than ever before. There were exports to Germany, Holland, Belgium, the Netherlands and other European countries, Germany being the best buyer and paying for what it bought in American, English or Swiss money. The export demand, however, was, of course, away below normal and improved very slowly.

Potashes

There was plenty of potash in this country during the year. Stocks were large at the beginning of the year, and large at the end. There was every inducement to German producers to market as much of this material in this country as possible, as conditions were very much in their favor. They paid for the coal and paid their workmen in ever depreciating marks and sold for good American dollars, which could be left in this country and were worth more marks right along. How much was the actual production cost to German producers in dollars and cents it is not possible to say accurately. Naturally it was very low. This made it possible for German producers to make a great deal more money by selling at pre-war prices than they could make at the same level of values in pre-war times.

The cost of production was higher in Alsace than in Germany, of course, but French producers had to meet the German price, and domestic producers did the same thing, even when they had to sell at a decided loss.

Until the tariff bill finally became a law there was a great deal of interest in the efforts of the American producers to have a tariff placed upon potash salts. Such a provision was placed in he bill and then taken out, and it was proposed to substitute a bounty for American producers. The bill finally became a law; however, there was no duty or no bounty provided for. During the time the matter was up for discussion there were larger imports into this country than there would have been otherwise, and the German producers encouraged this by making a reduction of the price late in the spring. There was a 3 per cent. advance later on, but potash prices were fairly steady during the entire year.

According to the plan of the foreign producers, large buyers get a discount ranging from 1 to 10 per cent., according to the amount bought. This encouraged some buying in combination during the year, and it also encouraged overbuying and resulted in the building up of an active resale market during the latter part of the year.

Potashes were not high when compared with the level to which consumers had become accustomed, and there was a liberal consumption. The German importers said that they were not able to say how much they brought in, but they brought in more than their French competitors, who placed their imports for the year at 71,480 tons of K_2O. The liberal consumption, however, did not keep stocks from accumulating, and many consumers had more potash on hand at the end of the year than any other sort of material.

Fertilizer Materials: Record of Prices

Nitrogen Fertilizers

Dried Blood

On December 10, 1879, the price was $2.37½@2.45 per unit; 1881, $3.75@3.85; 1891, $1.95@2.05; 1901, $2.30; 1911, $3.05; 1913, $2.95; March, 1920, $8.75.

	Per unit			
	1921.		1922.	
	H.	L.	H.	L.
January	$4.00	$3.75	$3.75	$3.50
February	4.00	3.50	4.15	3.75
March	3.50	3.00	4.15	4.00
April	3.00	2.90	4.00	3.25
May	3.00	2.90	3.50	3.25
June	3.00	3.00	4.00	3.50
July	3.00	2.90	4.50	4.00
August	2.90	2.75	4.60	4.60
September	3.00	2.90	4.60	4.60
October	4.00	3.25	4.60	4.50
November	3.40	3.25	4.65	4.60
December	3.75	3.40	4.75	4.60
Year	4.00	2.75	4.75	3.25

Cottonseed Meal

(F. O. B. Southeastern shipping points)

	Per ton			
	1921.		1922.	
	H.	L.	H.	L.
January	$31.00	$30.00	$33.00	$33.00
February	34.00	30.00	42.00	36.00
March	34.00	26.00	47.00	40.00
April	30.00	26.00	45.00	42.00
May	27.50	26.00	45.00	42.00
June	30.00	27.50	45.00	42.00
July	34.00	30.00	42.00	40.00
August	36.00	32.50	38.00	30.00
September	40.00	36.00	32.00	31.00
October	40.00	36.00	32.00	30.00
November	44.00	40.00	44.00	40.00
December	40.00	32.00	42.00	41.00
Year	44.00	26.00	47.00	30.00

Hoofmeal

On July 4, 1904, the price was $2.25@2.30 per unit; October 18, 1911, $2.60@2.70; 1913, $2.95; 1920, May, $7.50.

(F. o. b. Chicago.)

	Per unit			
	1921.		1922.	
	H.	L.	H.	L.
January	$2.90	$2.90	$2.25	$2.00
February	2.90	2.90	2.25	2.00
March	2.50	2.25	2.50	2.25
April	2.50	2.25	2.25	2.00
May	2.25	2.00	2.25	2.00
June	2.10	1.75	2.25	2.00
July	2.10	1.75	3.25	2.75
August	2.10	1.75	3.25	2.75
September	2.25	2.10	3.25	3.25
October	2.50	2.25	3.50	3.25
November	2.25	2.00	3.50	3.25
December	2.25	2.00	3.75	3.50
Year	2.90	1.75	3.75	2.00

Fish Scrap, Dry

On January 6, 1902, the price was $24.50 @25 per unit; October 18, 1911, $3.25 and 10c.; 1913, $3.10 and 10c.; 1917, November, $6.67½ and 10c.

	1921. Per unit	
	High.	Low.
January	$3.75 & $0.10	$3.50 & $0.10
February	3.75 & .10	3.50 & .10
March	Nominal	Nominal
April	3.50 & .10	3.00 & .10
May	3.25 & .10	3.00 & .10
June	3.00 & .10	3.00 & .10
July	3.00 & .10	2.04 & .10
August	2.60 & .10	2.40 & .10
September	3.00 & .10	2.60 & .10
October	3.50 & .10	3.25 & .10
November	3.25 & .10	3.00 & .10
December	3.25 & .10	3.25 & .10
Year	3.75 & .10	2.04 & .10

	1922. Per unit High.	Low.
January	$3.25 & $0.10	$3.25 & $0.10
February	3.50 & .10	3.25 & .10
March	3.50 & .10	2.50 & .10
April	3.75 & .10	3.75 & .10
May	3.75 & .10	3.25 & .10
June	3.60 & .10	3.25 & .10
July	3.00 & .10	2.40 & .10
August	4.15 & .10	3.85 & .10
September	3.85 & .10	3.85 & .10
October	4.00 & .10	3.85 & .10
November	4.85 & .10	4.50 & .10
December	Nominal	Nominal
Year	3.75 & .10	2.40 & .10

Fish Scrap, Wet

On January 6, 1902, the price was $13@13.50 per unit; October 18, 1911, $2.70 and 50c.; 1919, January, $7 and 75c.

	1921. Per unit High.	Low.	1922. High.	Low.
January	$4.00 & $0.50	$4.00 & $0.50		
February	Nominal	Nominal		
March	Nominal	Nominal		
April	Nominal	Nominal		
May	Nominal	Nominal		
June	Nominal	Nominal		
July	Nominal	Nominal		
August	2.50 & .50	2.25 & .50		
September	2.50 & .50	2.25 & .50		
October	2.75 & .50	2.50 & .50		
November	2.50 & .50	2.25 & .50		
December	2.50 & .50	2.50 & .50		
Year	4.00 & .50	2.25 & .50		

	1922. Per unit High.	Low.
January	$2.50 & $0.50	$2.50 & $0.50
February	Nominal	Nominal
March	Nominal	Nominal
April	Nominal	Nominal
May	2.75 & .40	2.75 & .40
June	2.75 & .50	2.75 & .40
July	3.25 & .50	2.75 & .50
August	3.00 & .50	2.75 & .50
September	3.00 & .50	3.00 & .50
October	3.00 & .50	3.00 & .50
November	3.50 & .50	3.50 & .50
December	3.85 & .50	3.50 & .50
Year	3.85 & .50	2.50 & .50

Nitrate of Soda

On September 23, 1874, the price was $2.12½@$2.37½ per 100 pounds; October 18, 1881, $3.25; 1891, $2.15@2.20; 1901, $1.90@1.92½; 1911, $2.25@2.27½; 1913, $2.95; 1918, May, $5.50.

	1921. Per hundredweight H.	L.	1922. H.	L.
January	$2.90	$2.75	$2.37½	$2.25
February	2.90	2.80	2.45	2.37½
March	2.75	2.60	2.80	2.45
April	2.75	2.60	2.90	2.80
May	2.75	2.60	2.80	2.60
June	2.70	2.50	2.70	2.50
July	2.25	2.00	2.55	2.45
August	2.15	2.00	2.55	2.35
September	2.20	2.15	2.40	2.35
October	2.40	2.20	2.45	2.40
November	2.25	2.15	2.47½	2.45
December	2.35	2.25	2.60	2.52½
Year	2.90	2.00	2.90	2.25

Sulphate of Ammonia

On March 5, 1873, the price was $7 per 100 pounds; October 18, 1881, $4.87½@5; 1891, $3@3.05; 1901, $2.77½@2.80; 1911, $3.20; 1913, $3.10; 1918, April, $7.85.

(Double bags, f.a.s., New York.)

	1921. Per hundredweight H.	L.	1922. H.	L.
January	$3.35	$3.25	$2.75	$2.55
February	3.35	3.20	3.00	2.75
March	3.20	2.75	3.25	3.00
April	3.00	2.75	3.65	3.50
May	2.75	2.65	3.50	3.25
June	2.50	2.25	3.50	3.25
July	2.25	2.15	3.50	3.40
August	2.15	2.00	3.40	3.30
September	2.25	2.15	3.65	3.50
October	2.60	2.50	3.65	3.50
November	2.60	2.50	3.65	3.55
December	2.60	2.55	3.60	3.50
Year	3.35	2.00	3.65	2.55

Tankage, Concentrated

(F. o. b. Chicago)

On September 4, 1889, the price was $2.27½@2.30 per unit; October 18, 1891, $1.75@1.80; 1901, $1.20; 1911, $2.70; 1913, $2.45; 1920, July, $7.25.

	1921. Per unit H.	L.	1922. H.	L.
January	$2.65	$2.65	$3.00	$2.75
February	2.65	2.50	3.50	3.00
March	2.50	2.00	4.00	3.75
April	2.25	2.25	3.50	3.25
May	2.25	2.25	2.50	2.25
June	2.25	1.75	2.75	2.50
July	2.00	1.75	2.75	2.50
August	2.00	1.75	4.00	3.50
September	2.25	2.00	3.50	3.00
October	2.25	2.25	3.50	3.25
November	2.25	2.25	3.50	3.25
December	3.00	2.50	4.25	4.00
Year	3.00	1.75	4.25	2.25

Tankage, Ground 11 & 15 Per Cent.

(F. o. b. Chicago)

	1921. Per unit High.	Low.
January	$2.90 & $0.10	$2.80 & $0.10
February	2.90 & .10	2.85 & .10
March	2.75 & .10	2.75 & .10
April	2.75 & .10	2.75 & .10
May	2.75 & .10	2.50 & .10
June	2.50 & .10	2.00 & .10
July	2.00 & .10	2.00 & .10
August	2.50 & .10	2.25 & .10
September	2.75 & .10	2.00 & .10
October	3.00 & .10	2.75 & .10
November	2.75 & .10	2.50 & .10
December	3.25 & .10	2.75 & .10
Year	3.25 & .10	2.00 & .10

	1922. Per unit High.	Low.
January	$4.00 & $0.10	$3.75 & $0.10
February	3.75 & .10	3.75 & .10
March	4.50 & .10	4.00 & .10
April	3.50 & .10	2.75 & .10
May	2.75 & .10	2.65 & .10
June	3.00 & .10	2.65 & .10
July	4.50 & .10	4.25 & .10
August	4.50 & .10	4.50 & .10
September	4.50 & .10	4.00 & .10
October	4.50 & .10	4.25 & .10
November	4.50 & .10	4.25 & .10
December	5.00 & .10	4.50 & .10
Year	5.00 & .10	2.65 & .10

Tankage, Unground, New York

	1921. Per unit High.	Low.
January	$3.85 & $0.10	$3.50 & $0.10
February	3.50 & .10	3.25 & .10
March	3.50 & .10	3.25 & .10
April	2.50 & .10	2.25 & .10
May	2.25 & .10	2.15 & .10
June	2.25 & .10	2.20 & .10
July	2.25 & .10	2.20 & .10
August	2.50 & .10	2.25 & .10
September	2.75 & .10	2.50 & .10
October	3.75 & .10	3.00 & .10
November	3.00 & .10	2.50 & .10
December	3.25 & .10	3.00 & .10
Year	3.85 & .10	2.15 & .10

	1922. Per unit High.	Low.
January	$3.25 & $0.10	$3.00 & $0.10
February	3.50 & .10	3.25 & .10
March	3.50 & .10	3.50 & .10
April	3.50 & .10	2.75 & .10
May	2.75 & .10	2.75 & .10
June	3.50 & .10	2.75 & .10
July	4.15 & .10	3.75 & .10
August	4.40 & .10	4.25 & .10
September	4.25 & .10	4.00 & .10
October	4.25 & .10	4.00 & .10
November	4.25 & .10	4.25 & .10
December	4.25 & .10	4.25 & .10
Year	4.40 & .10	2.75 & .10

Garbage Tankage, f.o.b. Chicago

	1921. Per ton H.	L.	1922. H.	L.
January	$8.00	$8.00	$4.25	$4.00
February	8.00	8.00	4.25	3.75
March	6.00	5.00	4.25	3.75
April	6.00	5.00	4.25	3.75
May	6.00	5.00	4.25	3.75
June	6.00	5.00	7.50	4.25
July	6.00	5.00	7.50	5.00
August	5.00	5.00	7.25	6.00
September	5.00	5.00	6.25	6.00
October	5.00	5.00	6.25	6.00
November	5.00	4.00	6.50	6.25
December	4.25	4.00	6.50	6.00
Year	8.00	4.00	7.50	3.75

Phosphates

Acid Phosphate

On January 7, 1885, the price was $12@15 per ton; October 18, 1891, $14.50@15; 1901, $9.60@10; 1911, $8@8.75; 1913, $7.20@8; 1920, June, $21.

	1921. Per ton H.	L.	1922. H.	L.
January	$18.00	$15.00	$10.50	$10.00
February	15.00	15.00	10.00	9.50
March	15.00	15.00	9.50	8.50
April	15.00	14.00	8.50	8.00
May	14.00	13.00	8.50	8.00
June	13.00	11.50	8.50	8.00
July	12.00	12.00	9.00	8.50
August	12.00	12.00	9.00	8.50
September	12.50	12.00	8.50	8.00
October	12.00	10.50	8.00	7.50
November	10.50	10.00	10.00	9.50
December	10.50	10.00	10.00	9.50
Year	18.00	10.00	10.50	7.50

Phosphate Rock, Florida Land Pebble, 68 Per Cent.

On June 8, 1881, the price (grade not specified) was $10@14 per ton; October 18, 1881, $9.50; 1891, $6.50@7.50; 1901, $7@7.50; 1911, $3.70@3.80; 1913, $3@3.25; 1920, July, $12.

	1921. Per ton H.	L.	1922. H.	L.
January		Nominal	$3.25	$3.25
February	$9.50	$9.00	3.25	3.25
March	9.50	9.00	3.25	3.25
April	9.00	4.50	3.25	3.25
May	6.00	4.50	3.25	3.25
June	6.00	4.50	3.25	3.25
July	6.00	4.50	3.25	3.25
August	6.00	5.00	3.25	3.25
September	6.00	5.00	3.25	3.25
October	6.00	5.00	3.25	2.75
November	5.00	4.50	3.25	2.75
December	4.50	3.75	2.75	2.50
Year	9.50	3.25	3.25	2.50

Bones, Raw, Ground

On July 18, 1880, the price was 28 per ton; October 18, 1881, $35@37; 1891, $25@28; 1901, $20@21; 1911, $28.50@30; 1913, $28@30; 1920, July, $62.50.

(F.o.b. Chicago)

	1921. Per ton H.	L.	1922. H.	L.
January	$40.00	$40.00	$31.00	$31.00
February	40.00	40.00	30.00	27.50
March	35.00	32.50	30.00	27.50
April	35.00	30.00	32.50	30.00
May	35.00	30.00	32.50	32.50
June	32.00	30.00	35.00	32.50
July	32.00	30.00	40.00	35.00
August	30.00	29.00	40.00	35.00
September	29.00	29.00	40.00	35.00
October	29.00	29.00	36.00	32.50
November	29.00	29.00	36.00	32.50
December	31.00	29.00	36.00	32.50
Year	40.00	29.00	40.00	27.50

Bones, Rough, Hard

On September 1, 1880, the price was $20@20.50 per ton; October 18, 1881, $25; 1891, $20@23; 1901, $19.50; 1911, $28.50@30; 1913, $22.50@24; 1920, August, $82.

(F. o. b. Chicago)

	1921. Per ton H.	L.	1922. H.	L.
January	$32.00	$30.00	$27.00	$25.00
February	32.00	30.00	27.00	25.00
March	32.00	30.00	27.00	25.00
April	32.00	26.00	27.00	25.00
May	32.00	26.00	27.00	25.00
June	27.00	26.00	27.00	25.00
July	27.00	26.00	30.00	27.00
August	27.00	25.00	30.00	27.00
September	27.00	25.00	30.00	27.00
October	27.00	25.00	27.50	25.00
November	27.00	25.00	27.00	25.00
December	27.00	25.00	27.00	25.00
Year	32.00	25.00	30.00	25.00

Bones, Soft, Steamed, Unground

On July 4, 1904, the price was $18@19 per ton; October 18, 1911, $21.50@22; 1913, $21.50@22; 1920, September, $40.

(F. o. b. Chicago)

	1921. Per ton H.	L.	1922. H.	L.
January	$28.00	$28.00	$15.00	$13.00
February	29.00	28.00	15.00	10.00
March	25.00	18.00	18.00	12.00
April	18.00	16.00	18.00	12.00
May	18.00	16.00	18.00	14.00
June	18.00	16.00	18.00	14.00
July	18.00	16.00	22.00	18.00
August	18.00	15.00	22.00	18.00
September	18.00	15.00	22.00	18.00
October	18.00	15.00	22.00	20.00
November	18.00	15.00	22.00	20.00
December	15.00	13.00	22.00	20.00
Year	29.00	13.00	22.00	10.00

Bones, Ground, Steamed, f.o.b. Chicago

	1921. Per ton H.	L.	1922. H.	L.
January	$29.00	$28.00	$21.00	$21.00
February	29.00	28.00	22.50	21.00
March	28.00	25.00	30.00	25.00
April	29.00	22.00	25.00	22.00
May	25.00	22.00	25.00	22.00
June	25.00	22.00	30.00	22.00
July	25.00	22.00	30.00	27.00
August	22.00	21.00	30.00	27.00
September	21.00	21.00	30.00	27.00
October	21.00	21.00	30.00	27.00
November	21.00	21.00	30.00	27.00
December	21.00	21.00	27.00	24.00
Year	29.00	21.00	30.00	21.00

Potashes

Muriate, 80@85 Per Cent., Basis 80 Per Cent.

On August 13, 1879, the price was $1.40@1.42 per unit; October 18, 1881, 73@76c.; 1891, 74@80c.; 1901, 76.25@78.80c.; 1911, 85@90c.; 1913, 80c.; 1918, January, $7.30.

	1921. Per unit H.	L.	1922. H.	L.
January	$1.80	$1.50	$0.75	$0.70
February	1.50	1.50	.70	.70
March	1.50	1.15	.70	.70
April	1.15	1.05	.70	.70
May	1.05	.95	*32.00	32.00
June	1.00	.90	32.00	32.00
July	.95	.90	32.95	32.95
August	.90	.85	32.95	32.95
September	.85	.85	32.95	32.95
October	.85	.85		Nominal
November	.85	.75	35.55	35.55
December	.75	.70	35.55	34.00
Year	1.80	.70	35.55	32.00

* Per ton.

Sulphate, 90@95 Per Cent., Basis 90 Per Cent.

On October 3, 1888, the price was $2.25@2.35 per unit; October 18, 1891, 83c.; 1901, 85c.; 1911, 94c.; 1913, 94c.; 1918, January, $8.

	1921. Per unit H.	L.	1922. Per ton H.	L.
January	$2.85	$2.15	$45.00	$45.00
February	2.15	2.15	45.00	44.50
March	2.15	2.00	45.00	45.00
April	2.00	1.50	45.00	45.00
May	1.90	1.50	41.10	41.10
June	1.50	1.35	41.10	41.10
July	1.35	1.25	42.35	42.35
August	1.25	1.20	42.35	42.35
September	1.25	1.20	42.35	42.35
October	1.25	1.20		Nominal
November	47.50	47.50	45.67	45.67
December	47.50	45.60	45.67	44.00
Year	140.00	45.60	45.67	41.10

Pyrites

Spanish, 48@50 Per Cent. Sulphur.

On January 2, 1905, the price was 10@11c. per unit; October 18, 1911, 10@10½c.; 1913, 10½@11c.; 1917, December, 25c.

	1921. Per unit H.	L.	1922. H.	L.
January	$0.15	$0.14	$0.13	$0.13
February	.15	.14	.11½	.11½
March	.15	.14	.11½	.11½
April	.15	.14	.11½	.11½
May	.15	.14	.11½	.11½
June	.15	.14	.11½	.11½
July	.14	.13	.11½	.11½
August	.14	.13	.11½	.11½
September	.13	.13	.11½	.11½
October	.13	.13	.11½	.11½
November	.13	.13	.11½	.11½
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Year	.15	.13	.13	.11½

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Oil of Vitriol	Dec. 18	21
of Wintergreen, Artificial	Dec. 4	21
Oils: Acetone	Oct. 2	21
Aniline	Sept. 11	21
Balm	Oct. 9	21
Banks	Sept. 18	21
Candle Nut	Oct. 16	21
Castor	July 10	21
China Wood	Oct. 9	21
Cottonseed	July 17	21
Cumin	Dec. 25	21
Egg	Oct. 2	21
Elemie	Oct. 2	21
Frankincense	Oct. 16	21
Fusel	July 10	21
Gallic	Nov. 27	21
Herring	Sept. 18	21
Kapoc	Oct. 30	21
Ladanum	Oct. 30	21
Lard	Oct. 16	21
Linseed	Aug. 21	21
Lumbang	Oct. 16	21
Mace	Dec. 18	21
Marjoram	Dec. 18	21
Mastic	Oct. 23	21
Melissa	Oct. 9	21
Menhaden	Sept. 18	21
Neatsfoot	Aug. 28	21
Nutmeg	Dec. 4	21
Vitriol	Dec. 18	21
Olibanum	Oct. 16	21
Olive	Sept. 25	21
Orris	Sept. 16	21
Palm	Oct. 2	21
Poppyseed	Oct. 30	21
Rapeseed	Nov. 6	21
Ravison	Oct. 16	21
Salmon	Sept. 18	21
Sardine	Sept. 18	21
Seal	Sept. 18	21
Sod	Sept. 18	21
Sperm	Sept. 18	21
Tung	Oct. 9	21
Whale	Sept. 18	21
Wintergreen, Artificial	Dec. 4	21
Oleic Acid	July 31	21
	Aug. 21	21
Oleum	Dec. 18	21
Olibanum Oil	Oct. 16	21
Olive Oil	Sept. 25	21
Orris Oil	Oct. 16	21
Orthoform	Sept. 25	21
Oxalic Acid	Oct. 16	21
Ox Gall	Oct. 16	21

P

Palladium	Oct. 16	21
Chloride	Oct. 16	21
Palmitic Acid	July 31	21
Palm Butter	Oct. 2	21
Oil	Oct. 2	21
Paraffin	Sept. 4	21
Pearl White	Nov. 13	21
	Dec. 25	21
Petrolatum	Nov. 6	21
Pharbitisin	Oct. 30	21
Pharbitis Seed	Oct. 30	21
Phenacetin	Oct. 2	21
Phenalymine	Sept. 11	21
Phenolphthalein	Nov. 6	21
Phenyl Acetaldehyde	Oct. 23	21
Acetate	Oct. 23	21
Ethyl Alcohol	Sept. 25	21
Propyl Alcohol	Sept. 25	21
Phenylene Diamine	Oct. 30	21
Phosphoric Acid	July 24	21
Phosphorus	Nov. 6	21
Plaster of Paris	Aug. 7	21
Platinum	Nov. 6	21
Poppyseed Oil	Oct. 30	21
Potash Alum	Sept. 25	21
Potassium Acetate	July 24	21
Alpha Dinitrocresol	Oct. 30	21
Ammonium Antimonyl Tartrate	Oct. 30	21
Arsenate	Oct. 16	21
Bicarbonate	Dec. 4	21
Bichromate	Dec. 11	21
	Dec. 25	21
Binoxalate	July 3	21
Bisulphite	Dec. 25	21
Carbonate	Sept. 4	21
	Dec. 25	21
Potassium Cyanide	Oct. 16	21
Ferricyanide	Nov. 6	21
Ferrocyanide	Nov. 6	21
Hydroxide	Sept. 25	21
Metabisulphite	Nov. 6	21
Nitrate	Sept. 25	21
	Oct. 9	21
Oxalate	July 3	21
Permanganate	Nov. 6	21
Persulphate	Dec. 18	21
Pyro Antimoniate	Sept. 25	21
Propyl Alcohol	Sept. 25	21
Prussian Blue	Sept. 25	21
Prussiate of Potash, Red	Nov. 6	21
Yellow	Nov. 6	21
Pseudo-Cumidine	Dec. 25	21
Pthalic Acid	Nov. 6	21
Anhydride	Nov. 6	21
Pyrazole	Sept. 11	21
Pyrolusite	Dec. 18	21

R

Radium Bromide	Oct. 16	21
Chloride	Nov. 6	21
Rapeseed Oil	Nov. 6	21
Ravison Oil	Oct. 16	21
Red Lead	July 31	21
Resorcinol	Nov. 6	21
Resin Copal	Nov. 6	21
Rosin	July 24	21
Rosolic Acid	Oct. 9	21

S

Saccharine	Nov. 6	21
Safrol	Nov. 6	21
Sal Ammoniac	July 31	21
Salicylic Aldehyde	Dec. 4	21
Salicylous Acid	Sept. 18	21
Salmon Oil	Nov. 6	21
Salol	Sept. 25	21
Saltpeter	Nov. 20	21
Sandarac	Sept. 25	21
Santonica	Sept. 25	21
Santonin	Sept. 18	21
Sardine Oil	Sept. 25	21
Satin White	Oct. 9	21
Scheele's Green	Sept. 18	21
Seal Oil	Nov. 6	21
Selenium	Sept. 4	21
Shellac	Sept. 4	21
Silver Acetate	Sept. 4	21
Chloride	Aug. 7	21
Slate Flour	July 24	21
Sodium Acetate	Dec. 18	21
Acid Sulphate	Sept. 25	21
Amide	Aug. 7	21
Arsenate	Nov. 6	21
	Nov. 20	21
Benzoate	Nov. 6	21
Bicarbonate	Dec. 25	21
Bichromate	Dec. 18	21
Bisulphate	Dec. 18	21
Fluoride	Nov. 6	21
Formate	Dec. 11	21
Hyposulphite	Sept. 25	21
Meta Antimoniate	July 3	21
Oxalate	Nov. 13	21
Perborate	Aug. 7	21
Silicate	Oct. 30	21
Sulphate	Nov. 20	21
Sulphide	Dec. 11	21
Sulphite	Dec. 11	21
Thiosulphate	Sept. 18	21
Sod Oil	Nov. 20	21
Spermaceti	Sept. 18	21
Sperm Oil	Sept. 4	21
Stannous Acetate	Oct. 30	21
Star Anise	July 31	21
Stearic Acid	Aug. 21	21
Stearine Pitch	Sept. 4	21
Strontium Nitrate	Sept. 4	21
Sulphur Chloride	Sept. 4	21
Dichloride	July 24	21
Dioxide	Nov. 20	21
Trioxide	Dec. 18	21
Sulphuric Acid	Oct. 2	21
Ether	July 24	21
Sulphurous Acid	Sept. 4	21
Sulphuryl Chloride		

T

Tartaric Acid	July 3	21
Tellurium	Dec. 25	21
Terpinyl Acetate	Nov. 13	21
Tetrachlor Ethane	Oct. 2	21
Thionyl Chloride	Sept. 4	21
Tin Acetate	Sept. 4	21
Chloride	Nov. 20	21
Titanium Dioxide	Sept. 25	21
Tung Oil	Oct. 9	21
Turpentine	July 3	21
	Dec. 25	21
Tragacanth	Nov. 20	21
Trinitro-Isobutyl-Xylene	Dec. 4	21
Tungsten Trioxide	Nov. 20	21

U

Ultramarine	Sept. 4	21

V

Vanadium Chloride	Nov. 20	21
Oxides	Nov. 20	21
Pentasulphide	Nov. 20	21
Pentoxide	Nov. 20	21
Sulphate	Nov. 20	21
Sulphide	Nov. 20	21
Vanadyl Sulphate	Nov. 20	21
Vanillin	Sept. 4	21
Vegetable Oil Fatty Acids	July 31	21
Vitriol, White	Nov. 20	21

W

Water Glass	Aug. 7	21
Waxes: Bayberry	Nov. 13	21
Bees	Nov. 13	21
Brazil	Nov. 6	21
Candelilla	Oct. 2	21
Carnauba	Nov. 6	21
Chinese	Nov. 6	21
Insect	Nov. 6	21
Wha'e Oil	Sept. 18	21
Whiting	June 26	21
Wintergreen Oil, Artificial	Dec. 4	21
Wood Alcohol	Aug. 28	21
Wool Grease	Sept. 25	21
Wormwood	Sept. 11	21

Z

Zibeth	Sept. 18	21
Zinc Acetate	July 24	21
Carbonate	July 24	21
Dust	July 24	21
Oxide	July 24	21
Resinate	Nov. 20	21
Stearate	Nov. 20	21
Sulphate	July 3	21
	Nov. 20	21
	Dec. 25	21